

INSTITUTIONS and DEVELOPMENT

Perspective from Alternative Economics



Edited by
Siddik Rabiyyath
Abdul Salim. A

The book is a compendium of nine studies related to institutions and development which are extracted from the studies conducted and funded by the Inter University Centre for Alternative Economics, University of Kerala. It is expected that the volume would be useful to the students of social sciences, researchers, academicians, policy makers and those interested on various aspects related to alternative economic perspectives for development.

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English

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Abdul Salim A was awarded Ph.D in Economics from the University of Kerala in 1993. He has 29 years of teaching and research experience (first at Jamia Millia Islamia, New Delhi, then in Government /Aided Colleges of Kerala and later at the Department of Economics, University of Kerala). Salim is the first Honorary Director of the Inter University Centre for Alternative Economics (IUCAE) in the University of Kerala. The Centre promotes research and innovative studies in heterodox economics. He has successfully completed six Major Research Projects sponsored by the UNDP, UGC, CDS and the University of Kerala. He had also served in several academic and administrative bodies. Salim has made substantial contribution in his specialized area of Economics of Education and published five books and 27 articles/papers in refereed journals and books. His major books are ‘Cost of Higher Education in India with Special Reference to Kerala’ (1997), ‘Educational Development in India- the Kerala Experience Since 1800’ (2002) (co-author Prof. P R Gopinathan Nair), ‘Unit Cost of Higher Education: A Study of Kerala University’ (2021), ‘Expansion, Equity and Efficiency of Higher Education in Kerala’ (2021). His edited volume is titled ‘Higher Education in Emerging India: Problems, Policies and Perspectives’.

Siddik Rabiyyath was born on March 15 1983 at Vizhinjam, a historically important fishing hamlet in Thiruvananthapuram, as the youngest child of Rabiyyath Beevi and Abdul Kareem. His schooling was from SV LPS and Venganoor Boys High School and higher studies from University College, University of Kerala, University of Hyderabad and Jawaharlal Nehru University. He joined the Department of Economics, University of Kerala as Assistant Professor in 2013. Currently having additional charges of Director, Department of Student Services (from 2018) and Director, Inter University Centre for Alternative Economics (from 2020), University of Kerala. Numerous national and international journal/popular articles, books and paper presentations are in his credit. The recent books are "Kadalalarude Jeevanavum Athijeevanavum (Life and Livelihood of Marine Fisher folks) 2021", "Navaudaareekaranathinte Parimithi kalum Badal Anweshanangalum (Limits of Neoliberalism and a Quest for Alternative) 2022", "Women, Work and Development" 2022, "Women, Education, Leadership and Development" 2022

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List of Contributors

Aabid Firdausi M S Research Scholar, Department of Sociology, Johns Hopkins University.

Anamika Dinesh Post-Graduation in Economics (2016-2017 batch), University of Kerala.

Arya Devi Post-Graduation in Economics (2016-2017 batch), University of Kerala.

Beena P L Associate Professor, Centre for Development Studies, Thiruvananthapuram.

Devisree G S Lawyer & MPhil in Human Rights, Department of Law, University of Kerala.

P K Sujathan Assistant Professor, Department of Economics, Govt. Victoria College, Palakkad

Reshma Rajeevan Assistant Director, Niti Aayog

Siddik Rabiyyath Assistant professor, Department of Economics, University of Kerala

T J Joseph Assistant Professor, Department of Economics, Central University of Kerala, Kasaragod

Tanita Eloo Philip Research Scholar, Department of Economics, University of Kerala

Vijayasree R M Research Scholar, Department of Economics, University of Kerala

Introduction

Evolutions of economic ideas are closely linked with the specific historical situation of each society. Nowadays, the economic ideas that are taught as universally acceptable principles and policies are prescribed as one size fit for all. The cornerstone of this view stems from individual rationality and utility maximization. Given the kind of socio-economic reality of the present world economy, the persuasion of the standardized norm is not helpful for all. At an alternative level, humanism is increasingly foregrounded in resolving present problems and the whole socio-economic and even the political framework is incrementally getting revolutionized on the principles of rights rather than individual rationality. Development thus envisages new economic ideas and policy regimes. Further in the modern economy, especially under the onslaught of capital and its vociferous idea of individualism, the whole lots of issues already emerged so far and in the process of emergence cannot be dealt with the mono lens of capital and its supporting neoclassical idea. This requires studies beyond the mainstream and dominant neoclassical ideas that are embedded in present curriculum.

Alternative economics provides an alternative approach to mainstream economics which helps to explain the economic phenomenon that is ignored or unaddressed by more conventional theories. It can credibly explain why some groups of people have been impotent to make advancement on their standard of living in comparison to peers by incorporating history and power into the hypothesis. Alternative economics often seeks to entrench social and historical factors into analysis, as well as evaluate the way in which the behavior of both individuals and societies alters the development of market equilibria. There is also more diversity in heterodox approaches and this has also led to more multi-disciplinary analysis of economic problems. Economics has been very focused on

market-based explanations. It is possible that this is the best approach for the majority of problems. However, the heterodox approaches to power—social, financial and political—do seem to fit a regular person's experience in the world and the history of this world better than some of the widely accepted mainstream theories.

Alternative economists would counter that these were not pure applications. In reality, there is never a pure application of any school of economic thought. We tend to stick to our orthodox approach because, even imperfectly done, it has worked out better for us on the balance. That said, heterodox economics is playing an important role by continually challenging the orthodox school to prove that it really is better in practice, not just by tradition. The great visionaries like Mahatma Gandhi and the policymakers of the country have realized the critical role of Alternative Economics for advancing the cause of a just and egalitarian society. They have also realized the need for a research base which can accelerate the growth and development of our country. No doubt, development of a nation requires sustained efforts, innovative ideas and innovations. In this context, we need to integrate various alternative socio-economic ideas and thereby strengthen our research base to meet the challenges of the fast growing knowledge economy.

With the new developments in the economic theory of organizations, information, property rights, and transaction costs, an attempt was made to integrate institutional aspects into more recent developments in mainstream economics, under the title new institutional economics. New institutional economics (NIE) is an economic perspective that attempts to extend the economics by focusing on the institutions that underlie economic activity and with analysis beyond earlier institutional and neoclassical economics. Among the many aspects in current analyses are organizational arrangements, property rights, transaction costs, credible commitments, modes of governance, persuasive abilities, social norms, ideological values,

decisive perceptions, gained control, enforcement mechanism, asset specificity, human assets, social capital, asymmetric information, strategic behavior, bounded rationality, opportunism, adverse selection, moral hazard, contractual safeguards, surrounding uncertainty, monitoring costs, incentives to collude, hierarchical structures and bargaining strength. Institutional economics focuses on understanding the role of the evolutionary process and the role of institutions in shaping economic behavior.

Institutions matter a great deal in determining the level of economic development of a country. Cross-country analyses use indicators such as degree of protection of property rights, the rule of law, and civic liberties and it is found that they are strongly correlated to the economic performance of a country. Institutions determine the costs of economic transactions: they spur development in the form of contracts and contract enforcement, common commercial codes, and increased availability of information, all of which reduce the costs of transactions, risk, and uncertainty. Institutions determine the degree of appropriability of return to investment: protection of property rights and the rule of law spur investment and thus increase incomes. Institutions also determine the scope for oppression and expropriation of resources by elites: unequal institutions which allow the dominance of powerful elites over economic exchange strongly limit development, as can be seen in the case of many ex-colonial countries. Lastly, institutions determine the degree to which the environment is conducive to cooperation and increased social capital; inclusive and participatory institutions increase the flow of information and the extent to which resources can be pooled to reduce risk and ensure sustained levels of wealth. This fits nicely with the finding of historical studies that high quality institutions today are rooted in greater equality, political competition and cooperative norms in the distant past. Institutions strongly affect the economic development of countries and act in society at all levels by determining the frameworks in which economic

exchange occurs. They determine the volume of interactions available, the benefits from economic exchange and the form which they can take.

Institutions comprise of contracts and contract enforcement, protection of property rights, the rule of law, government bureaucracies, and financial markets. It includes habits and beliefs, norms, social cleavages and traditions in education which are called as informal institutions. Formal institutions typically tend to be the manifestation of informal institutions, as social norms in the dominions of gender, class and caste, for example, determine rules of political participation and representation, methods of economic exchange, and inclusion of different groups in society. In combination with micro-level studies, cross-country experimental studies, provide strong support for the overwhelming importance of institutions in predicting the level of development in countries around the world. Protection of property rights, effective law enforcement and efficient bureaucracies, together with a broad range of norms and civic mores, are found to be strongly correlated to better economic performance over time. Institutions support economic development through four broad channels: determining the costs of economic transactions, determining the degree of appropriability of return to investment, determining the level for oppression and expropriation, and determining the degree to which the environment is conducive to cooperation and increased social capital.

In a landmark study of new Institutional Economics, Rodrik, Subramanian and Trebbi (2002) assess the relative importance of institutions, geography and integration (trade) in determining the differences in incomes between the world's most developed countries and the poorest ones. They find that institutional determinants "trump" all others. It is not a new intuition that for the prospering of economic activity institutions matter. Adam Smith had already noted this in surprising detail, referring to the importance of a justice system,

private property rights, and the rule of law (*The Wealth of Nations*).

The protection of property rights necessitates an extended title role for the state authority. As the individuals and groups admit levies and taxes to cover the regulating expenses and the monopoly of the state over the use of common security forces, they are sacrificing a degree of autonomy to safeguard state protection. Yet, there is a risk that states which have the power to enforce property rights may use that power to take property too. This increases the risk of economic transactions. Thus property rights are by no means adequate to offshoot economic growth, and must be balanced by institutions which limit the extractive capacity of state power. These include self-governing parliaments and judiciaries. Democratic institutions of political representation strongly contribute to this process (Rodrik, 2000).

Entrepreneurship is recognized as the high risks intricate in initiating a startup. There is a fact that people often face failures along their pathway to success. Due to a lack of fund, sales decisions, or a lack of demand in the market, some businesses have to close down. That's why entrepreneurship is mostly viewed as something risky and out of the comfort zone in a mainstream perspective. Over the past several decades the role of entrepreneurship in economic development has become an essential factor of employment, and innovations enhances the market competition. Entrepreneurship is the primary factor in the growth of economies. Each new business launched has an impact on an economy and affect people around it. Entrepreneurs acquire capital from their equity sources or loans from banks to build their business which adds value to the creation of wealth, influencing the economy and industrial structure of a country directly. It helps to eliminate disparities between regions through an implementation of industry in countryside and areas less developed. The growth of industries and companies in various fields led to the development of services such as road, public transportations, health, education

and entertainment. The implementation of those industrial activities resulted in the development of a more vibrant economy.

The power of economy is, in fact, the natural consequence of industrial and commercial activities. The industrial development at times builds to a concentration of economic power of only a few, while entrepreneurship and the growth of companies act to counter that concentration. Enterprise is a force that multiplies the players of an economy and reduces the concentration of economic power. New businesses stimulate the fair redistribution of wealth and income for the interest of the country through a large population covering a larger geographical area and thus offering benefits to larger sections of the society. Entrepreneurship leads to the emergence of secondary activities and therefore allows a multiplier effect in the economy. Entrepreneurs are always seeking new opportunities. They explore and exploit various possibilities encouraging the active mobilization of funds and skills. They contribute to new products and services and develop new markets which grow an economy. An enterprise contributes to increasing the Gross Domestic Product (GDP) and income per resident, which results in economic growth. Improving the quality of life of a population is a characteristic of a country's economic development. Entrepreneurs play a vital role in improving the quality of our communities and individuals' lifestyles; they adopt the latest innovations in the production of vast and various goods and services on a large-scale to reduce the cost. The goal is to offer a better product or service at a lower cost.

The chapter 'Neoliberal Capitalism: the Case for a Marxist Class Analysis' **Aabid Firdausi M S** reviews the shifts in global capitalism with special focus on the neoliberal phase and the resulting effects that are diverse in nature. This is a step towards understanding the multidimensional pervasiveness of the logic of capital which needs to be examined critically. The case for a class-based analysis is made with a view to understand the structural as well as agential dynamics of

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capitalism. The latter aspect enables us to explore a diverse range of possibilities that can check the neoliberal onslaught - ranging from systemic reform to radical refashioning of human activities in the micro as well macro-scale. The paper makes the case for analysing the totality of neoliberal capitalism from the Marxist perspective of class-analysis, which is historical, multiscalar and multifaceted in nature. This is essential because while neoliberalism is fundamentally about economic reforms, its implications are multidimensional. It is necessary to understand the systemic nature of capitalism and its influence on politics, culture, and society, so as to develop and encourage counter-hegemonic struggles that are radical in nature.

The chapter entitled 'Gandhian Approach to Rural development: A Study of Sustainable Farming by Gandhian Smaraka Grama Seva Kendram' by **Anamika Dinesh and Arya Devi** examines the possibility of achieving sustainable rural development through Gandhian outlook. Gandhian ideas of economic planning and development always had a different perspective than traditional ideas of the same. The development strategies put forward by this school of economic thought rather depended on rural development, emphasizing self-sufficiency, inter-dependence for wants and development of Village Industries. Practices of this kind are not common but not absent in our development economic sphere. Gandhi Smaraka Grama Seva Kendram (G.S.G.S.K.) is a well-developed example to study the pros and cons of adoption of Gandhian thoughts in a developing economic system. The paper examines the sustainable farming programmes initiated by G.S.G.S.K. and how far they have been successful in setting up a rural agrarian development model based on Gandhian principles.

The chapter titled 'Role of Institutional Governance in Economic Development with Special Reference to Marginalized Slum Dwellers in Kerala' **Reshma Rajeevan** tries to highlight the role of institutional governance in economic development and the need for ensuring the quality and effectiveness of governance for making possible the Less

Developed Countries to climb the development ladder at a faster pace. The importance of good governance is an important factor that has not received its deserving importance in the theories of economic development. Enhancement of living conditions of the marginalised sections is also an important dimension of economic development. Though there exists a plethora of governmental schemes, we have a long way to go to ensure better living standards to the poor and vulnerable sections of the society. The present study is an earnest attempt to highlight the importance of the role of institutional governance in the systematic execution of governmental schemes. For this purpose, the present study examines the execution of two centrally sponsored schemes for slum development in Kerala namely Basis Services to Urban Poor (BSUP) under the Jawaharlal Nehru National Urban Renewal Mission (JNURM) and Rajiv Awas Yojana (RAY). It has been done on the basis of direct interaction with the potential beneficiaries of these projects and replies received through Right to Information pleas from concerned Municipal Corporations. The study tracks the progress of these schemes and brings out fallacies associated with it such as implementation lags, information asymmetry etc. Along with it the study also points towards the problems faced by these slum dwellers such as inadequate public service delivery with respect to housing, sanitation, waste management etc. Further the study put forward practical suggestions to empower slum dwellers as well as for the better execution of governmental programmes.

The chapter entitled ‘Commercial Surrogacy – Legal Lacunae and Socio Economic Consideration’ by **Devisree G.S** examines the legal lacunae in the field of regulating surrogacy in India and the ethical and economic considerations of surrogacy in the present context. Surrogacy is a complex situation where application of technology is assisted in the reproductive process. In this process, multiple actors of diverse social and economic conditions are involved at multiple levels. One has to understand surrogacy, with the understanding of all

these complexities. The surrogacy industry in India is valued at more than \$400 million, with over 3,000 fertility clinics nationwide. The rapid expansion of this industry in India can be attributed to a combination of factors. No uniform law is available in India on regulating the practice of commercial surrogacy. Since there are ambiguities in the provisions of law, frequent legal battles have been fought in cases of surrogacy. Further the existing uncertainties have made the surrogacy arrangements more complicated. The present study exfoliates the legal lacunae in the field of regulating surrogacy in India and the ethical and economic considerations of surrogacy in the present context. To understand the ethical and economic concerns of surrogacy, surrogacy cases handled in Samad Hospital, Trivandrum was analysed. The study is a compact analysis of socio – economic considerations of commercial surrogacy in Kerala.

The chapter entitled ‘Impact and Implications of Institutional Intervention among Tribes in Kerala’ **P K Sujathan** made a germane attempt to look into the impact and implications associated with the role of institutions to mitigate the socio-economic issues of the scheduled tribes at Attappady, the only tribal block panchayat in Kerala state. The study sailed through service delivery mechanisms of ten institutions for the tribes and it was unequivocally concluded that there exists rampant inter institutional disparity in the service delivery functionality for tribes. It was, therefore, construed to be the moot reason for the sorry state of affairs among tribes. The study concluded with tangible and salient alternatives as policy prescriptions to bring the conditions of tribes back on track.

The chapter titled ‘Civil Society and Social Capital: Case Study on JCI’ by **Tanita Eloo Philip** focuses to examine the presence of social capital characteristics in voluntary organizations and how it plays the role of civil society. Here, JCI is taken as a case to analyze the influence of social capital in voluntary associations so as to build a civil society. Some countries are successful in establishing their democratic

government than others. The reason behind this is still a persistent puzzle. The problem is not with the number of sheer resources injected into a country, but the presence of favorable conditions for effective allocation of resources to attain priority goals. Commitment of government towards development, transparency and efficiency of bureaucracy are the significant factors in this respect. Never these two conditions emerge in a social vacuum. Thus, the role of civil society, rights and responsibilities of citizen and the features of social organization must be taken into account. Social capital facilitates the exchange of resources and skills across sectors. Through exchanges, civil society can serve as the beneficiary (via philanthropy, tax exemptions and management training) as well as the benefactor (offering political support, policy recommendations and service provision) as there is limit to what government could achieve in a society. Therefore, policy-makers are attracted by social capital. It costs nothing and promises the world, writes Christopher Scanlon. Social capital reintroduces a moral dimension into policy thinking. The paper considers JCI as a case to analyze the influence of social capital in voluntary associations so as to build a civil society.

The chapter 'IPR Regime and Developmental Implications of IP Asset Intensive Industries' **Beena P L and Siddik Rabiyyath** analyses the growth, profitability and developmental implications of Indian industries with a special reference to selected IP asset intensive industries through the lens of Intellectual Property Rights institutions. As the existence of the firm in the modern industrial structure, the production and marketing functions of the firms and hence their growth are determined through different institutional framework. The institutional understanding of contracting, property rights and asymmetry of information play a crucial role and rationalises the existence of firm as a unit of production, which indeed different from the market functioning as the neoclassical theory suggests. Generally such institutional safeguards often missed from the economic analysis of the industry. Therefore the study

of developmental implications of the firms and industries are inextricably linked to the existence of different non market institutions, which often marked outside the neoclassical framework. The surge in IP Assets in India is an indication of such a type of institutional change. Given this context, the current paper tries to analyse the growth, profitability and developmental implications of Indian industries with a special reference to selected IP asset intensive industries through the lens of Intellectual Property Rights institutions. Although the ultimate objective of competition and intellectual property policy should be to raise social welfare by promoting the supply of new and existing products and services at low prices, our paper argues that IPR regime raises rather than reduces barriers.

The Chapter on ‘Youth Entrepreneurship in Kerala: Problems and Prospects’ by **Vijayasree R M** analyses youth entrepreneurship in Kerala, with special reference to Thiruvananthapuram district. The study analyses various factors motivating and challenging young entrepreneurs, and evidences these factors to be an alternative to the traditional notion of a firm. Youth unemployment and the ways to tackle it have become the major policy considerations of recent time. As traditional career paths become scarce, entrepreneurship is increasingly accepted as an important alternative. It is inferred that agreeing to the popular behavioural notion of multiplicity of goals of a firm, the firms studied also had diverse goals, of which the desire to be self-employed and thus earn social dignity was found to be the most important motivation. Further, as against the traditional approach to decision making with complete rationality, the behaviour of sample units were tampered with uncertainties and decisions were made with bounded rationality. This issue of uncertainty was found having the least influence among cooperative consortium. Short term success in market was found to be less self-reinforcing as the market is prone to continuous volatility. Thus to be successful over the long run, the young entrepreneurs should invest in surrounding themselves with the right growth coaches to ignite

their paths ahead. From the system perspective, more doors need be open for start-ups and other self-employment ventures for youth, locally and outside that shall act as a potential agent; regenerating growth waves.

The chapter entitled “Transfer of Property Rights on Land, Land Use Changes and Agricultural Production in Kerala” by **T J Joseph** explores the role of the transfer of property rights on land in the form of land transactions and agricultural land utilization in agricultural production. The trend of the agricultural land transaction for non-agricultural purposes has increased recently in India, particularly in the State of Kerala. The transfer of property rights on agricultural land to non-agricultural purposes is a threat to the proper utilization of such land for agricultural activities. When the property rights on agricultural land are transferred, the transacted land can be further used for agricultural production or kept idle or converted for non-agricultural purposes. When the land is used to continue agriculture, as assumed by the traditional economic theories, it adds to the agriculture production and thus the growth of the economy. However, if the transacted land is either kept idle or converted for non-agricultural purposes, it is not going to add to the agricultural production. General observation shows that the use of converted agricultural land for the latter-mentioned cases is on an increase. Therefore, much attention has to be given to this neglected area of research. The study treats the extent of land transactions as an indicator of the extent of property rights transferred on land. The study assessed the trends and patterns of land transactions and agriculture production in Kerala by reviewing the dynamics in land use and agricultural change in Kerala. The study identified the factors influencing agricultural production in Kerala.

The present book hence is a compendium of nine studies related to institutions and industries which are extracted from the Short Term Projects, Internships and Associate Research Programmes offered by the Inter University Centre

for Alternative Economics, University of Kerala. It is expected that this volume would be useful to the students of social science, researchers, academicians, policy makers and those interested on various aspects related to alternative economic perspectives.

SIDDIK RABIYATH

ABDUL SALIM A

1

Neoliberal Capitalism – The Case for a Marxist Class Analysis

Aabid Firdausi M.S

Capitalism is undoubtedly the dominant social order around the world, especially since the decline of the Left bloc in global geopolitics. This has resulted in structural economic reforms around the world that were imposed in a top-down fashion by international financial institutions like the IMF and the World Bank. This has been referred to as the neoliberal phase of capitalism, which primarily involves two economic elements – fiscal conservatism and deregulation to benefit private capital. In other words, the state plays a different role when compared to the erstwhile regulated phase of capitalism. At the heart of this mutation is the shift in the distribution of power among the classes in capitalism and the changing contours of the terrains of class struggle. The structural shifts in class power have produced corresponding changes in all aspects of society including politics and culture. This does not imply a mechanistic or linear causality (determinism) between these phenomena that rules out the role of agency of the various actors involved. In fact, recognition of this agential aspect is pivotal to put in perspective the counter-hegemonic struggles that exist around the world as well as spaces that attempt to counter the logic of private capital. However, the pervasion of the neoliberal logic in every realm of society necessitates the need to recognise the multidimensionality or totality of neoliberalism, i.e. neoliberalism should not merely be understood with respect to change in state policies alone.

This paper reviews the shifts in global capitalism with special focus on the neoliberal phase and the resulting effects that are diverse in nature. This is a step towards understanding the multidimensional pervasiveness of the logic of capital which needs to be examined critically. The case for a class-based analysis is made with a view to understand the structural as well as agential dynamics of capitalism. The latter aspect enables us to explore a diverse range of possibilities that can check the neoliberal onslaught - ranging from systemic reform to radical refashioning of human activities in the micro as well macro-scale.

Capitalism – A System of Perpetual Class Struggle

The history of capitalism is closely linked to the history of trade that preceded it. The flows of mercantile capital that preceded the Industrial Revolution had opened up new trade routes that were advantageous to colonialism and which aided the consistent globalisation of capital. Yet the transition to the capitalist mode of production had only been complete with the development of agrarian capitalism and subsequently, large-scale industries, run by a capitalist class that was compelled through market dependence to reinvest their surplus in production.

This compulsion was systemic as the logic of capital was to “accumulate for the sake of accumulation” as opposed to the feudal mode of production where no such necessity existed. Thus, capitalist dynamics depends on and perpetuates the continuous development of productive forces and market dependence. This was distinct from feudalism where exploitation was directly linked to the consumption of the feudal lord. Exploitation under capitalism is to perpetuate the dynamism of capitalism.

Capitalism’s origins in certain sections of Europe were attributed to the Protestant work ethic by classical sociologist Max Weber (1905). The Weberian argument emphasises the role of religious reform, specifically, Calvinism that motivated

individuals to work harder, live an austere life, and focus on wealth creation, so as to achieve salvation, which was otherwise denied to them, as they were not Catholics. The argument might have some merit, but fails to explain the subsequent spread of capitalism around the globe. The ethic that Weber highlights is not peculiar to any particular religion or region; it is the systemic logic that compels individuals to act in certain ways, irrespective of their identity and personal beliefs, as we shall see later.

For classicals, capitalism that was based on the premise of free trade and equal exchange stressed the importance of civil liberties that disbanded the fixed hierarchies of the pre-capitalist order. Free trade was widely promoted so as to increase the wealth of nations as well as to realise the values of freedom, liberty, and equality. What Marx highlighted was the class nature of these theories and propositions, as he categorised them as “vulgar” and “bourgeois” economists, as they were advocating the doctrine of the capitalist class. For example, Smith rallied against mercantilist restrictions that went against the interests of the nascent bourgeoisie and Ricardo criticised the Corn Laws that raised the price of imported corn so as to make available cheap food for the emerging working class in England. The class character of society and economics was put to the forefront in Marx’s analysis, this leads to his understanding the historical specificity of capitalism.

Similarly, the origins of capitalism, for Marx, were anything but idyllic, as capital came “dripping from head to foot, from every pore, with blood and dirt” (Marx, 1867). Marx traces this to the violent process of primitive or primary accumulation that involves the dispossession of the peasantry and petty producers from land and their traditional means of production. This results in the commodification of labour power – the capacity to labour, and results in the worker being “free” in the dual sense (as opposed to bourgeois notion of freedom) – free to sell their labour power and free from the ownership of

means of production. The latter sense of freedom posits the existence of two fundamental classes – capitalists and workers, with the former appropriating surplus value (that corresponds to unpaid labour time which is the source of profits) from the producers of value, i.e. workers. This surplus value is then distributed to other subsumed classes - this includes tax payments which is a way of mobilising revenue for state expenditure as well as direct contributions to other sections of society where direct appropriation of surplus value is not possible (see Rensick& Wolff, 1981).

As Marx writes in his Theories of Surplus Value, “The result of the capitalist production process is neither a mere product (use value) nor a commodity, that is, a use-value which has a certain exchange-value. Its result, its product, is the creation of surplus-value for capital”. In Marxist class analysis, production is thus not merely a technical relationship between inputs and outputs, as it is conceived in latter-day neoclassical theory, but reflect a social relationship between different classes in society. Thus, the social relations of production reflect the relations between classes in society. This forms the foundation of the fundamental class structure in capitalism that corresponds to two structural logics – the logic of the capitalist and the logic of wage labour (Chibber, 2017).

The logic of the capitalist compels them to adopt strategies to increase efficiency and respond to opportunities for profitability that would amount to a greater expropriation from the producers of surplus value. The capitalist to stay in competition will have to adopt such techniques, irrespective of their individual character, i.e. the capitalist is ‘capital personified’. On the other side, the logic of wage labour necessitates that the laboring classes will have to sell their labour power for wages, so as to meet their subsistence needs. These logics operate wherever there exists capitalism, and individuals, irrespective of their identity, act accordingly so as to sustain themselves within the system.

The two logics are fundamentally antagonistic, as classes try to pursue their material interests. A profit squeeze becomes necessary for an increase in wages and a wage squeeze is a ubiquitous method to increase surplus value. These contradictions play out in a terrain that is marked by various degrees of class struggle so as to appropriate more and more surplus value. Exploitation can take two common forms - the extraction of absolute surplus value and relative surplus value. Absolute surplus value is extracted by extending the working day, i.e. increasing the working hours. Due to class struggles that imposed limits to this method of extraction through fixing work hours per law, capitalists resorted to the extraction of relative surplus value. This is through technological advancements, increasing capital intensity, etc. that contributes to higher productivity. The shifting configurations of class relations results in diverse social outcomes as well as characterised different phases of global capitalism, as we shall see below.

Phases of Global Capitalism

Capital has globalised, and to a great extent universalised – as the aforementioned logics operate wherever capitalist production operates. The growth of global capitalism has also witnessed distinct phases wherein different nation-states assume a prominent, if not hegemonic role in responding to as well as dictating the rules of the international order. However, the constant objective in the changing geopolitics has been to stabilise global capitalism as well as to undermine any alternatives to the existing order, be it direct political colonialism or new forms of imperialism. Thus, these phases correspond to distinct hegemonic players who dictate distinct patterns of governance and control that in turn correspond to particular configurations of class relations in society.

Broadly we can identify three phases of capitalism – viz. liberal capitalism, regulated capitalism, and neoliberal capitalism (Solimano, 2014) The liberal capitalist phase

corresponded to the period of industrial capitalism before the World Wars and represented a dogmatic faith in free markets, with limited role of the state. Neoclassical economics was the orthodoxy, and the class configurations were tilted to benefit capital. This had been so since the Industrial Revolution and workers, though unionised as a result of labour movements, were largely subservient to capital's interest. Accordingly, inequality was extremely high, as incomes from the ownership of capital far outstripped wages to the laboring classes.

Liberal capitalism in the West, since the industrialisation phase, had thrived on colonial expeditions, of which the British Empire enjoyed hegemony. The industrialisation of the West happened parallel deindustrialisation of the East, especially India and China (Nayyar, 2013). The rhetoric of free trade was used, but in reality, handicrafts and other products from the periphery faced high tariff rates, as opposed to the low tariff rates imposed on finished goods from the core. This crippled the domestic industries in the periphery and has subsequently affected the economic development of these regions.

In the cultural sphere that often served as propaganda for the colonial cause, extremely racist rhetoric was employed that portrayed the whites as being responsible for bringing civilizational values to the underdeveloped South. Capitalism was built in the Americas through genocide of indigenous natives and by then relying on cheap labour from the slave trade. Thus, here we see how identities are constructed, crystallised and salvaged for capital accumulation.

The liberal capitalist period also saw the rise of financial institutions like banks and stock markets. Financial assets, that hitherto played a role in being the means to lubricate the production process, became an end in itself by virtue of short term profit generation. The inter-imperialist rivalry during the World War caused massive destruction of capital and the real sector faced a crisis of profitability. It was these

contradictions that led to the crisis of the 1930s, also known as the Great Depression that changed the domestic class configurations in advanced capitalist countries, affected the international order, and gave way to the second phase of global capitalism, i.e. regulated capitalism.

Regulated capitalism arose out of the crisis of the previous phase, and found its theoretical backbone in Keynesian economics that advocated pro-active public investment as opposed to the laissez-faire approach of classical and neoclassical economics. The advanced capitalist countries adopted a series of public works programmes, most notably the New Deal, that gave employment as well as rejuvenated infrastructure in an economy where private investment was low. The changing geopolitics is also quite significant here – as the British empire faced considerable losses after the War and had faced political opposition due to de-colonisation/national liberation struggles in the Global South.

This phase marked the ascendancy of the US that incurred relatively less damage during the Wars, and by then, had been growing considerably well in the Global North. Thus, the post-war consensus that saw the international order being set by the Fund-Bank institutions, and the adoption of the US dollar as the global currency owing to the stability of the currency, gave rise to an unprecedented hegemonic status for the United States economically (through the Marshall Plan for reviving demand in post-war Europe), culturally (through the mass consumption phase that gave rise to American consumerism), and politically (through leading the global counter-revolution against communism).

The Keynesian consensus arose out of the crisis of capitalism as well as the crisis of systemic legitimacy that threatened the capitalist class. Soviet socialism that was erected on the edifice of the Bolshevik revolution was a formidable alternative and an external threat to the capitalist order economically (through state-planning) politically (through

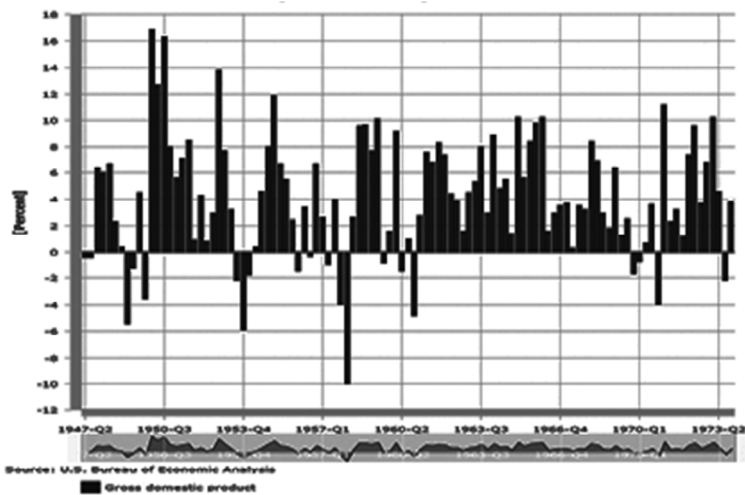
enforcing labour rights) and morally (through the fight against fascism). Moreover, the internal economic crisis after the Depression had resulted in the failure of private enterprise to sustain investment. Labour unions gained strength through mass mobilisation and the bourgeois electoral parties were compelled to take into account the demands made by an organised and militant working class. As Harvey (2005) notes, this was a class compromise between capital and labour which was mediated by the state that became more welfare-oriented and supportive of collective bargaining. This tripartite institutional framework worked to a large extent to stabilise the system, curb inequalities, and generate growth rates, in a period that was known as the “golden age of capitalism”.

However, this ‘golden age’ had been fraught with several problems. One, it was white working-class males that had benefited from such reforms, largely due to the nature of unions as well as systemic racism that alienated people of colour as well as native Americans. Women were largely relegated to the household, as the family operated on a breadwinner model. Both these issues were raised in the countercultural struggles of the 1960s, among many other issues. Second, examining quarterly GDP growth rates reveals certain trends (Figure 1.1). The years between 1945 and 1973 saw at least five instances of recession. The years 1950-53 that recorded the highest growth rate saw the US involving as a principal player aiding South Korea in the Korean War. Thus, the highest growth rate recorded during the Golden Age was possibly due to a military build-up during wartime.

This gives insights into the nature of how the tremendous growth of capitalism in the USA was tied to militarist interventions and sheds light on the post-colonial imperialist nature of the hegemonic state. The US had proactively built military bases around the world and hiked its defence spending in the name of national interests, which was essentially to preserve the global capitalist order and secure its imperialist position. Thus, it is disputable whether it was the

New Deal or the military expenditure that helped the US to recover from the Depression. However, sustainably regulating capitalism and tilting the system to relatively better the conditions of labour resulted in a profitability crisis in the 1970s.

Figure 1.1 Percentage Change from Preceding Period in Real GDP during Golden Age (1947 Q2 to 1973 Q2)



Source: US Bureau of Economic Analysis

The contradictions of regulating capitalism in favour of labour along with certain shocks related to the price of oil led to the rollback of the welfare state and a reassertion of policies in favour of capital, or “capital resurgent” as Dumenil & Levy (2004) called it. This is the neoliberal phase of capitalism which was characterised by fiscal conservatism where the state had to curtail its expenditure so as to meet deficit targets and deregulation so as to benefit private capital. The Fund-Bank actively promoted neoliberal economic reforms in the Global South, most notably in Chile, where a democratically elected government under Salvador Allende was toppled to put in place

a brutal dictatorship under Augusto Pinochet. The neoliberal phase, which was a frontal assault on labour, tilted the class configuration in favour of capital and led to the reversal of the gains made due to class struggle in the erstwhile regulated phase. Another significant insight is how the state serves as a malleable instrument or can be seen as a site of class struggle. State policies can either explicitly align with the predatory interests of capital or align with the interests of labour through devising social protection schemes and targeting full employment. The nature of state policies to a great extent depends on the global class struggle.

Monetary theory and supply-side economics that eschewed such labour-centric policies constituted the theoretical backbone for neoliberal policies. Friedman (1951) had hoped that neoliberalism would be the major current of opinion and this fructified with the capitalist class actively supporting think-tanks like Mont Pelerin and Heritage Foundation. Corporate-controlled media played a significant role in propaganda and “manufacturing consent” (Herman & Chomsky, 1988), for example, through advertising and entertainment that helped built up the “culture industry” (Adorno & Horkheimer, 1944). Thus, neoliberalism had a profound cultural effect by sustaining itself with ideological weight embodied in Thatcher’s maxim of There Is No Alternative. This means that neoliberalism has been profoundly multidimensional in its implications, some of which we examine below.

Implications of Neoliberal Capitalism

It needs to be noted at the very outset that traids considered endemic to neoliberal capitalism are in fact consequences of a socioeconomic system that leaves capital unchecked in its quest for higher profits. The Marxist analysis thus leaves no space for a romanticisation of the erstwhile regulated phase, as the neoliberal phase is an organic evolution of capitalism which witnessed an acceleration of technology,

development of productive forces, and a changing configuration of class relations. Thus, what is commonly understood as issues with neoliberalism are in fact issues with capitalism in general that is systematically prone to crisis and instability. The neoliberal economic policies, in coalescence with the objective process of globalisation, have led to neoliberal globalisation which has multidimensional implications, some of which we identify below.

- i. The “financialisation of everything” (Storm, 2018) due to the pervasiveness of finance capital and its hegemony. Stock market indicators that have little bearing on the condition of the large majority of people have come to be taken as barometers of development. This is largely due to the increased investment in finance, insurance, and real estate (FIRE) sectors that have fuelled speculative short-termism instead of long-run productive investment of the Keynesian type. The deregulation of finance by diluting capital controls has made it easier for short-term capital flows (hot money in portfolio flows) which triggers external account crises, especially in the Global South.
- ii. Deindustrialisation due to de-territorialisation of production in the advanced capitalist countries and the rise export-oriented production in the Global South. The increased contribution of finance to the GDP of the advanced capitalist countries coupled with the development of transport and communication technologies made it more profitable to outsource production to the Global South to take advantage of cheap labour. Industrial policies in the Global South are completely discarded because of their semblance to planned economies.
- iii. The deregulation of markets and business practices which brings out the volatility of market as well as heightens the instability of finance, resulting in episodes like the East Asian Financial Crisis of the late 90s, and the Global Financial Crisis in 2007-08. This involves reduction in tax

rates on big capital, most notably, abolition of wealth tax, reduction in corporate tax rates and capital gains taxes, etc. The tax structure, thus turns out to be regressive, which indirectly affects the poor more.

- iv. Dilution of labour laws, for example, the proactive discouragement and systematic oppression of working class unionisation and collective bargaining (tripartite) institutions. The weakening of labour rights and poor working conditions are beneficial for capitalist firms in the North that outsource production to domestic capitalists in the South. A case in point is the super-exploitation in the global garment industry.
- v. Fragmentation of the working class through contracts, giving rise to segments of workers with different levels of precarity. Informalisation of employment becomes the norm even in the formal sector. This partitioning disproportionately affects those workers from minority groups (Blacks and Hispanics in the US, Dalits, Muslims and Adivasis in India, etc.) and impedes class-based solidarity due to the heightened non-class differences.
- vi. The dismal record of creating employment and worsening material conditions gives rise to blaming the “other” and the rise of ethno-nationalist and xenophobic discourse, shifting the Overton Window in political discourse towards the right, and the consolidation of far-right ideology in the public sphere.
- vii. Retrenchment of the welfare state through fiscal conservatism and austerity where the state cuts back on investments in social services, transport systems, agriculture, etc. This is done with the neoclassical justification that public expenditure can crowd out private investment which has little empirical backing. While some degree of restraint is expected, neoliberal fiscal policy dogmatically constrains expenditure even during times of low inflation and recession, because of focusing on supply-

side issues alone. The declining public investment in agriculture plays a major role in accentuating agrarian distress and land redistribution is no longer in the agenda.

- viii. Commodification of public goods like health and education due to privatisation (and declining state investment). This has increased living costs and makes people vulnerable to poverty. For example, in India, education and health is inadequately under-funded despite recommendations of various committees. The American neoliberal model of healthcare has been exposed as being utterly inefficient to address the needs of the American people, most strikingly during the COVID-19 pandemic.
- ix. Burgeoning social inequalities around the world, largely due to the exponential growth in incomes to capital-owners and the near-stagnant share of labour in national income (Piketty, 2014). Wealth inequalities (due to inheritance and ownership of assets) that are much difficult to measure have grown more than income inequalities (that are measured based on tax-based documents). Coupled with rising living costs, intergenerational upward social mobility has become increasingly difficult.
- x. The relaxation of environmental norms to benefit big capital and looming global ecological crisis, largely due to overwhelming dependence on fossil-fuels and non-renewable resources. This has unduly benefited energy companies that has lobbied for influencing policy discourse on climate change, reasons why the progressives in the US are calling for a Green New Deal.
- xi. De-politicisation of universities by promoting curriculum that is business-oriented, and the under-funding/shutting down of centers and departments that engage in critical social research. Education policies framed by the state, often in consultation with big capital, are aimed at creating efficiency-maximising workers and not all-round human development.

- xii. Promotion of a culture of individualism and cut-throat competition that is justified by equating the system with a meritocracy, which it is not. Individuals are made to feel responsible for social issues that are structural in nature. This has led to mental health issues like anxiety and depression as the system rewards psychopathic behaviour.

Responses to Neoliberalism

The discussion above shows how diverse neoliberalism is in its implications. By highlighting the multidimensionality, we see how discussions on neoliberalism with respect to economic policies alone cannot be adequate. This helps us to understand the totality of neoliberal capitalism as a social system which goes beyond discussions on the fundamental change in the nature of the state alone. Such a holistic perspective helps us to understand that reforms need not be sustainable and tweaking state policies are not enough – a fundamental break from neoliberalism implies addressing structural issues of capitalism as a social system.

Have we entered a post-neoliberal phase? The financial crisis of 2007 did not result in a break with the system, but had deeply affected its legitimacy, especially in the massive amount of money pumped into save the finance sector from collapse. This transfer of money was siphoned to benefit the elites of banking institutions and corporations which had severely affected the moral legitimacy of the system. This has led to diverse responses ranging from occupying public spaces to policy advocacy of stabilisation mechanisms. We analyse them below.

In terms of policy proposals, we can identify three categories. The first set includes progressive economists that have called for tax reforms like a global wealth tax (Piketty, 2014), tweaking the tax structure to curb inequalities and reversing the neoliberal deregulation drive. This implies increasing domestic corporate taxes, regulating speculation activities of banking institutions, curbing offshore tax havens

through international policy intervention, putting in place capital controls to stem hot money flows, etc. Another set of policies pertain to injecting purchasing power into the economy as employment generation is low and as existing jobs are facing the threat of automation and are extremely precarious. The most popular proposal in this respect is the Universal Basic Income (UBI) which has been tried in select regions with positive benefits (Standing, 2012; Painter & Thoung, 2015). UBI provides an assured income support to all citizens and is often argued as being a gateway to secure livelihoods.

The third set of policies can be identified as replicating the Keynesian public works programme, increasing investment in social services like health and education, and providing an alternative to the monetarism à la Friedman that sets inflation targeting as its concerted objective. The Green New Deal has been finding much support in this respect which is framed as a proposal to curb economic inequalities and address the catastrophe of ecological crisis. The Green New Deal envisions stepping up public investment to upgrade infrastructure so as to drastically minimise their dependence on fossil fuels and shift to clean and renewable energy sources. Such policies are to be financed by the state, and the theoretical backbone for such proposals has been called Modern Monetary Theory (MMT) that fundamentally argues that the state should not be worried about deficits as it is the sole authority that can print money 'out of thin air'.

Apart from policy responses, we also see public responses against the hegemony of neoliberalism. Class inequalities have been highlighted in various forms around the world. The most notable was the protest in the US was the form of Occupy movements which was a form of reclaiming public spaces through massive demonstrations. While this has certainly helped in bringing to light the effects of neoliberal capitalism, it stopped short of advocating any concrete political strategy. Yet the Occupy movement in 2011 that resonated around the world was the sign of the possibility of counter-

hegemonic struggles. In 2020, the resurgence of the Black Lives Matter has led to pivotal questions of racial capitalism and American militarism.

Another set of responses include the rising tendency to escape the system, in the form of communes and so on. While this is marginal in scale, escaping capitalism obviously does not solve anything. A more pragmatic response has been the revival of cooperatives so as to democratically run enterprises and give more voice to labour. Spain's Mondragon which is one of the largest cooperatives in the world, the UK's Preston Model which is an example of local community-based governance, and Kerala's Uralungal Labour Cooperative that has been successful in the construction sector are examples of cooperative alternatives.

Concluding Remarks – The Case for a Class Analysis

The diverse responses briefly detailed above are necessary to address the crisis in human development under contemporary capitalism. While these policies, if implemented together, would help in breaking with neoliberal capitalism, it does not necessarily imply that the structural issues are addressed. The Marxist response, therefore, is radical in character, because of its ability to grasp the fundamental aspects of any social issue under capitalism.

The task therefore is to refashion society to put the interests of labour above capital and to abolish the capital-relation wherein labour is subjugated to the diktats of capital for commodity production. This involves structurally addressing the class antagonisms and recognising that a return to Keynesianism does not solve the profitability crises that are endemic to a society where the social relations of production are divided along class-based lines. In the same vein, MMT falls short in recognising that the value of money is intimately tied to public faith in capitalism. Patnaik & Patnaik (2015) have highlighted how imperialism sustained itself via income deflation in the periphery so as to curb the increasing supply

price of output, which would have threatened the stability of the monetary system in the core. Reorienting social relations of production does not happen via top-down macro-state policies or through the scattered micro-presence of cooperatives.

The proposal of basic income again falls into the same trap as it serves as an excuse to continue with existing structures without addressing class relations. It needs to be noted that there exists enormous scope for meaningful work to be done, and a post-work society is not practically relevant as of now. The radical refashioning of the society in the Marxist project involves a dialectical relation between the macro and the micro, the structural as well as agential aspects. Though the working class are structurally exploited, they are structurally in a position to challenge the root of exploitation as well. This involves the recognition that class struggle exists at all realms of society – from the point of production to the level of the state and local community. Class analysis and historical materialism, therefore, is multidimensional and world-historical (Campling et al, 2016). The strength of Marxist political economy, therefore, lies in bringing this theoretical rigour to the practical questions of social justice.

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2

Gandhian Approach to Rural Development: A Study of Sustainable Farming by Gandhian Smaraka Grama Seva Kendram

Anamika Dinesh & Arya Devi

“I know that the work of making an ideal village is as difficult as to make of India an ideal country. But, while it is possible for one man to fulfill his ambition with respect to a single village someday, one man's lifetime is too short to overtake the whole of India. But if one man can produce one ideal village, he will have provided a pattern not only for the whole country, but perhaps for the whole world. More than this a seeker may not aspire after.” Mahatma Gandhi

Rural Development has never been a new concept for India it is rather interwoven in the heritage of Indian culture, mention of it has been made along with the history of mankind. Even in the famous epics like Ramayana and Mahabharata the instances of rural governance in terms of welfare of the people, justice to the people has been made. During the British rule, no sincere efforts were made for rural development. Famines were a common phenomenon, and rural agrarian economy suffered a lot under the feudal system. The tillers of the soil were isolated from their land. According to Ministry of Rural Development (2013-2014) India has the largest rural population in the world. Sixty-nine per cent of Indian population, that is 833 million people, lives in rural areas. The population of rural India is

about 12% of the world population, which makes it bigger than the size of Europe.

Most of the rural people remain engaged in farm related activities. It is difficult to make out a living from the small and marginal farms upon which over 80 per cent of rural households depend. The unemployment rate in rural India has increased by 2% in rural areas. As on January 1, 2010 the number of unemployed was 9.8 million. By January 1, 2012 it has increased to 10.8 million. In rural areas poverty ratio remained above 50% with a marginal decline until mid-1990s and declined faster thereafter. Promoting development in rural areas is a slow and complex process faced with many challenges. The enhancement of productivity and income of rural communities is at the core of rural development. Due to lack of adequate options, majority of rural population rely on agriculture and farm related works for their livelihood. Moreover, social and economic inequality adversely affects people's quality of life; leading to a higher incidence of poverty.

Gandhi was one of the biggest actors who have contributed towards the field of rural development; his experiments as well as economic thoughts have always been the source of inspiration. Gandhi looked at Rural Development in his own unique way. Gandhi ever equated happiness with economic prosperity and physical pleasure alone. His concept of the Rural Development was totally opposed to the utilitarian concept of development. It is Gandhi's deep-rooted conviction that individual happiness lies in the happiness of society and vice-versa; and this is constantly seen in almost all his pronouncements regarding rural development. He considered man superior to the system he propounded.

A major objective of Gandhi was to rebuild India with the village as its nucleus. He was in search of the soul of India which according to him lies in her innumerable villages. Gandhi proclaimed that if once the villages perish India too will perish.

Gandhi said, "My idea of village swaraj is a complete republic, independent of its neighbors for its vital wants, and yet interdependent for, many others in which dependence is a necessity." Villageswaraj provides the key to understand the concept of decentralization.

Gandhi visualized an ideal social order wherein man and machine together would promote the basic human values. The approach of Gandhi based on decentralization with its corollary people's empowerment opens up a new chapter in the socio-economic and political order. Gandhi sought to revive villages for it is impossible to have non-violence on a factory civilization which is essentially materialistic. Thus Gandhi advocated Swadeshi, which symbolizes economic self-reliance and economic independence. He envisaged an ideal socio-economic and political order with the individual at its center. For Gandhi, true economics, stands for social justice; it promotes the good of all by equally including the weakest, and is indispensable for decent life."

The Gandhian approach to economic problems is an essentially practical and Gandhian approach to rural development accepts the method of planning and development but of different nature. He did not want it along industrial lines. He wanted to prevent our villages from catching the infection of industrialization. Gandhian plan is man centered one. As the plan has an integrated approach to rural life it covers all the aspects of rural life. Gandhi is a champion of swadesi or home economy. According to him mass production forces the people to leave their villages, their land, their craft and their homesteads. Gandhi was always laying stress on the twin principles of maximum production and fuller employment.

Gandhi Smaraka Grama Seva Kendram (G.S.G.S.K.), the district level branch of Gandhi Smaraka Nidhi started to function in Mararikulam Alappuzha district from the year 1958. During the initial years it mainly worked to strengthen the work of leprosy eradication and the rehabilitation process. The socio-

political and economic condition of S.L. Puram, Alappuzha where G.S.G.S.K. is functioning had been very pathetic in the initial period. Exploitation as well as lack of hope was very severe in all parts of life and besides, poverty and unemployment were deep rooted in the society. The fight between landowners and workers occurred frequently in these places. So people in these areas were not interested to co-operate with the principles and ideologies attached with the Gandhi an activities in the beginning. The G.S.G.S.K. started to function here after the Punnapara-Vayalar-Mararikulam agitation. The activities of this Centre have really helped to enhance the spiritual awakening and moral upliftment of the people. Later on, several committed and dedicated youth came forward to co-operate with the activities of the Centre.

During 55 years of its existence, G.S.G.S.K. has done yeo-man service to empower the poor and the marginalized segments of rural population in Alappuzha district. It has extended successfully an array of services to the people in agriculture, particularly zero budget natural farming and organic farming, rural industries, microfinance, participatory technology development, education, rural housing, health insurance and women empowerment.

In Alappuzha district majority of the people works in the areas of agriculture and laborers. Kuttanad, water logged area belongs to this district. It is also considered as a store house of rice in the state of Kerala. Due to the lack of natural resources and cash crops this district is segregated mainly for farming and other activities. In Kerala number of people involved in farming is decreasing day by day. But people in Alappuzha district still stick on to the traditional agricultural activities. Here the farmers do play a major role in promoting agricultural sustainability, environmental safety and food security. The G.S.G.S.K. works in close collaboration with the expertise of these farmers in taking the agriculture forward. Rural development is very much linked with agriculture development. The form of agricultural practices which enables

us to produce healthful food without compromising future generation's ability to do the same is sustainable farming which is the most promising solution for the present agrarian crisis. Under this context sustainable farming practices facilitated by G.S.G.S.K. needs special attention.

Statement of the Problem

The G.S.G.S.K. in Alappuzha district is a voluntary agency working for the development of rural community by upholding Gandhian principles. Intervention of G.S.G.S.K. in the field of sustainable farming requires special attention because it holds potential to revolutionize the current agrarian scenario. Development of agriculture along sustainable lines can speed up the process of rural development. The research aims to study the sustainable farming programmes initiated by G.S.G.S.K. and how far they have been successful in setting up a rural agrarian development model based on Gandhian principles.

Review of Literature

MRD (2013-14) report tells us the present condition of rural India is no different from the pre-independent India. The synthesis of the ideas of Mahatma Gandhi with the ideas of the modern world will create a more holistic and integrated society. It will deliver more happiness, generate more altruistic economic surplus and bring about a more egalitarian society than what is now available to us.

M.K. Gandhi (1941), Constructive Programme, very clearly mentions socio-economic and political problems which are deep rooted in Indian villages. He dreamt that Indian village people should be free from malnutrition, poverty and unemployment in near future. The principle of non-violence could be upheld in the present society through the village economy as well as the sufficient marketing methods. He emphasizes the need for rebuilding Indian villages and its developmental features in all dimensions. Shriman Narayan

(1960) very clearly and analytically explains the Gandhian planning to the society and its implementation. He presents some arguments for proving the authenticity of Gandhi's view on rural development approach.

Krishna Nandela (2013) points out that economic philosophy of Gandhi is written about, discussed and talked about, however, when it comes to implementation, it is criticized for being impractical and imaginary. He was of the opinion that, the village swaraj model of development could have been implemented in selected villages of the country by ensuring sufficient flexibility in the techniques of production so that these villages not only attain self-sufficiency but also generates sufficient agricultural and village industry surplus for the growing urban population of the country.

J D Sethi (1978) observes that 'Gandhi broke the dichotomy between the individual and the society; such dichotomy made irrelevant of all the questions raised by the so called welfare economics. What Gandhi did was to lay down principles and methods of practice by which the individuals and social utility function were jointly determined. A non-violent economic society and the replacement of demand oriented production by need oriented production are two principles out of the many he put forward'. Abraham Kurian (2014) analyses the role of Gandhi SmarakaNidhi in rural development. He found that G.S.G.S.K. in Mararikkulam, which is functioning according to the principles of Gandhi have helped to improve the economic development of villages in Alappuzha district.

Rural folks could attain self-sufficiency and self-reliance through various people centred programmes of the centre in farming and other non-farming sectors which itself underlines the importance of Gandhian ideas. Bisha (2009) in her study points out that, Gandhi's mission was to reconstruct India from bottom upwards, a decentralized socio-political and economic order with India's myriad villages at its base. His concept of rural reconstruction and development are based on

independent, self-contained, autonomous, self-supporting, self-ruling and self-reliant village communities in which life will not be a pyramid with the apex sustained by the bottom but an oceanic circle whose center will be the individual.

Gandhi was of the view that every village should enjoy maximum freedom to manage its own affairs even to the extent of defending itself against external invasion and to attain social and economic self-reliance. All that he said and did reflect the Indian framework of thought.

Some literatures related to Gandhian principles and ideas on rural development are presented above. Since Gandhi worked out meticulously for the details of a wide variety of practical things which are vital to build a graceful village life. His conception of the village was not anchored on the modern notion of development but on the post-modern perspective of quality of life. His main emphasis was on the quality of life. So far various studies conducted are not comprehensive hence the present study attempts to examine if sustainable rural development is possible to achieve through Gandhian outlook with the following objectives.

Objectives

- ☐ To understand Gandhian approach of rural development.
- ☐ To examine various activities of G.S.G.S.K..
- ☐ To identify various methods of sustainable farming implemented by G.S.G.S.K. and to analyze it under the framework of Gandhian principles.

Methodology

The study focuses on the sustainable agricultural activities of G.S.G.S.K. in Alappuzha district under Gandhian outlook. Whole study is based on descriptive qualitative method. Data collection was done using both primary and secondary data. Primary data was collected through direct

personal interviews (DPI) and site visits. Both administrative staffs and beneficiaries were interviewed. For convenience beneficiaries were selected from Mararikulam. Agricultural activities of G.S.G.S.K. are implemented through various Joint Liability Groups. Best performing beneficiaries were selected from different groups according to convenience. In order to collect data G.S.G.S.K. centre at S.L.Puram, houses and fields of beneficiaries at Alappuzha and Gandhi SmarakaNidhi at Trivandrum were visited. Secondary data was obtained from various research publications, books, reports of various committees and commission, periodicals and annual report of G.S.G.S.K.

Gandhian Approach to Rural Development

‘The development of the country lies in the development of the rural masses and rural areas’.

Gandhi was neither a pure academic nor an economist, the socio-economic conditions of the 19th century world; the circumstances and surroundings in which he was born and brought up, all these have exerted influences on Gandhi’s ideas and principles. The Indian villages were self-sufficient economic units before the colonial era. Village industries and handicrafts flourished highly in the pre-British India. Trade and commerce were of a high order during that period. As a result of the British rule in India the capital that had accumulated in India over these centuries drained away. As a result the self-sufficient, self-reliant and autonomous nature of Indian villages was completely destroyed. These socio-economic conditions that existed in India during Gandhi’s times also influenced him in shaping many of his economic ideas like swadeshi, self-sufficiency, self-reliance, emphasis on village and cottage industries etc. His opposition to the multiplication of wants and the creation of urban-industrial civilization is linked with his love of the ancient Indian villages-their self-sufficient, self-reliant, autonomous and prosperous nature. By emphasizing khadi and other village and cottage industries in his economic

philosophy Gandhi wanted to rejuvenate the self-sufficient nature of ancient Indian village system.

Rural development for Gandhi is a self-sufficient village economy and self-sufficient village community. He emphasized the utilization of local resources for development. Gandhi realized that India lives in her villages and villages constitute the heart of India. That is why he said, "I would say that if the village perishes, India will perish too. India will be no more India. Her own mission in the world will get lost". He found that the destruction of self-sufficient, self-governing and self-supporting Indian village economy is the main reason for the decay of Indian villages. For him the objective of rural reconstruction is to attain village swaraj. Only through village swaraj it is possible to attain a sarvodaya order of society. Through rural reconstruction Gandhi advocates a rural and agrarian civilization based on neighborliness and sharing.

Gandhi wanted to make the affairs of rural development the work of the rural people itself. Their participation is highly relevant to the effective implementation of programmes and schemes having direct, immediate bearing on their socio-economic life. The Sevagram project established by Mahatma Gandhi in 1936 is an answer to all problems of rural development. The project was a scheme of rural development for a self-sufficient and self-governing village community managed by rural people themselves, with the motto 'individual is supreme'. Gandhi's model of ideal village was free from all kind of social evils like untouchability, illiteracy, unhygienic conditions, health hazards and religious intolerance. This same idea is reflected in AmartyaSen's work 'Development as Freedom'. In which he says development is freedom, freedom from all social evils.

Gandhi's idea of decentralization of economic and political power was the principle idea behind Panchayat Raj scheme approved by the National Development Council in January 1958. Local self-government of the modern times is

essentially a British creation. But Article 40 of the constitution is considered as a victory of the Gandhian approach. It says "The state shall take steps to organize village panchayat and endow them with such powers and authority as may be necessary to enable them to function as units of self-government". The 73rd constitutional amendment act passed in December 1993 has given a new direction to the Panchayat Raj system. But the performance of the Panchayat Raj system in many states has become weak and ineffective. The present effort for rural development is criticized for its much dependence on governmental assistance rather than the self-help; for its spoon feeding approach than the self-reliance and cooperation. It was said that, despite the administrative innovations from the Balwant Rai Mehta Committee to the present 73rd constitutional amendment act people's participation in the process of development could not be ensured and above all the whole process was taken to task as it failed to provide proper leadership to the rural poor.

Gandhi says, 'my idea of village Swaraj is that it is a complete republic, independent of its neighbor's for its own vital wants, and yet interdependent where dependence is a necessity. Thus, each village's first concern would be to grow its own food crops and cotton for its cloth. It should have a reserve of its own for its cattle, recreation and playground for adults and children. Education will be compulsory up to the final basic course. As far as possible, each activity may be conducted on a co-operative basis. There will be no caste discrimination such as we have today with their graded untouchability. Non-violence with its technic of Satyagraha and non-cooperation must have the sanction of village community'.

Importance of Grama Swaraj in Rural Sector

The term Grama Swaraj means self-rule and self-restraints. In this ideal village if people are doing any wrong thing or ill-legal activities it would not be treated in a harsh

method rather reformation of the mental attitude of the culprit is the panacea. While emphasizing the concept of village swaraj, Gandhi's intention was to create a non-exploitative, non-violent, non-competitive society in the near future. The article written by Gandhi in Harijan in 1942, very clearly says that 'my idea of village swaraj depend upon perfect democracy based on individual freedom'. Some of the main elements included in the Gandhian concept of village swaraj are trusteeship, swadeshi, bread labour, self-sufficiency, decentralization, co-operation and equality. By swaraj his intention was to liberate the human beings from evils, bondage and low human dignity (Lal: 1981)

Relevance of Swadeshi in Rural Sector

Gandhi had announced swadeshi movement in order to boycott the foreign clothes and the other foreign items. Gandhi defines swadeshi as, 'that spirit within us which restricts us to the use and service of our immediate surroundings to the exclusion of the more remote'. The main aim was that all the villages in India would be well and sufficient enough to produce essential items for its own survival. In the villages, the success of swadeshi depends upon the people's attitude for buying the products which are made locally. At the same time Gandhi never liked to keep ill feeling or bad attitude towards the foreign people or their product. The doctrine completely depends on self-less service based on love and ahimsa. In case of any need the villagers should have the responsibility supply essentials commodities to the nearby villages. In the moral field its emphasis is to attain the decentralized economy so that village development would take place simultaneously in the country. (ShashiPrabha Sharma: 1992) Khadhi was an instrument put forward by Gandhi to communicate the idea of swadeshi. Production for use, not for a market is the essence of Khadhi economics. The pathetic condition of the British India forced him to emphasize on Khadhi as providing relief to the poverty-stricken masses. Thus, he placed spinning wheel at the center of his economics.

Relevance of Bread- Labour in the Rural Sector

Gandhi had developed this concept by reading the books of Ruskin, Tolstoy and New Testament. According to Gandhi he who eats without offering sacrifice eats stolen foods. Sacrifice here means bread labour. Bread labour concept would give new vigour among the many unemployed people living in the rural areas of the country. People can attain essential items such as food, shelter, and clothing by doing the physical labour in far and near places of the villages. No labour is too mean for one who wants earn an honest penny.

Relevance for Trusteeship in Rural Sector

The idea envisaged by Gandhi for the concept of trusteeship got great admiration and wide discussion all around the world. “Gandhi advised the owners of property to consider themselves as trustees of the property which really belonged to the whole society and manage it accordingly, taking only what they needed for their own upkeep but using the rest for the welfare of society.” (Mathai,2000) As per the concept people who have enough money should act as a trusty and use the money wisely for essential purposes. The greedy mind and the money-oriented life style were the real cause behind the increase of various social problems and criminality in society. By implementing this concept society can avoid class war and the fight between poor and the rich. In many rural places of India especially in remote areas people are almost living like slaves and the rich land lords are exploiting the skill and manpower of these poor for increasing their profit. But the trusteeship concept says that the landlords should donate excess land to hundreds of landless people living in our country.

Implication of Sarvodaya in the Rural Sector

The meaning of Sarvodaya is welfare of all. This concept asserts that development should reach to the last person in the society. Truth and non-violence are the two main components associated with this concept. Here Gandhi had

specifically mentioned the reframed social and economic order which is more convenient to rural people. The basic unit of sarvodaya society is the self-sufficient village having the ability to fulfill all the basic needs of the people in the rural sector. (Abraham Kurian, 2013). Ultimate aim of sarvodaya movement is to uplift the downtrodden and to make a silent revolution in the society through the change of people's attitude as well as appropriate development strategy concerned to the rural people.

Self-Sufficient Village Economy

Gandhi wanted every village to be self-contained republic, each village should grow articles for its own consumption. The solution to the problems of villages was given the top priority in his plan so that poverty could be eradicated and people would be happy and self-reliant. He laid emphasis on the revival of village industries like soap making, paper making, Khadhi industries etc. The village will serve as a part of the decentralized economy. The village economy must satisfy two major objectives. The first, it would provide maximum employment and income to the inhabitants, and second, it would generate equality, freedom and justice.

In villages, there are village industries and cottage industries. The production, consumption and distribution of villages industries are confined within them. In the case of cottage industries, the articles may be produced for the entire country and sometimes for foreign countries. Gandhi believed that in large scale industries there is a sense of alienation. In village industries human capability expansion is feasible through nonviolent methods.

Sustainable and Environment Friendly Development

Gandhi has strongly recommended the ecofriendly cultivation and production method. "Gandhi believed that economic productivity, environmental protection, maintenance of resources and social justice should go together with growth" (Asha Patel, 2005). Gandhi was against the policy of over

exploitation of natural resources in order to get rapid economic growth by blindly following the western method of development.

Constructive Programme and its Relevance for Rural Development

Gandhi has designed constructive programme which includes eighteen programmes for the reconstruction of Indian villages. The Gandhian movements of rural reconstruction consist of:

- Communal unity
- Removal of untouchability
- Prohibition
- Khadi
- Other village industries
- Village sanitation
- Basic education
- Adult education
- Women
- Education in health and hygiene
- Provincial language
- National language
- Economic equality
- Kisans
- Labour
- Adivasis
- Lepers
- Students

Gandhi had intense desire to see the development of the poor and the downtrodden who live in the rural areas. He strongly believed that not only the material progress but also the progress of morality is very essential for the success of the country. Gandhi had introduced constructive programme consisting of eighteen items especially for the wellbeing of rural people.

Gandhi visualized a new social order- Sarvodaya which would be egalitarian, classless, casteless and without the division of high and low. Sarvodaya negates the utilitarian philosophy of the greatest good of the greatest number. Sarvodaya stands for the good and happiness of all. Here all individuals have equal opportunities for their development. The sarvodaya is free of seven evils- politics without principle, education without character, science without humanity, wealth without work, commerce without morality, worship without sacrifice and pleasure without conscience. The economic system in the sarvodaya order of society always makes a balance between economic progress and moral progress. That is why Gandhi said that truth and non-violence are the corner stone of the sarvodaya order of the society. For him, real happiness is a combination of material, moral and spiritual growth

Socio-Economic Activities of G.S.G.S.K.

Gandhi Smaraka Grama Seva Kendram (G.S.G.S.K.) ,S.L.Puram, Alapuzha is the district level branch of Gandhi SmarakaNidi, Trivandrum. The latter is the Kerala state unit of Gandhi Memorial National Trust Delhi. G.S.G.S.K. was established in the year 1958 as a non-profit, secular, nonpolitical institution to take rural development programmes. The territorial jurisdiction of G.S.G.S.K. is Alapuzha district covering 71 Grama panchayat, 12 block panchayat and 5 municipalities. During these eventful years of existence G.S.G.S.K. has won laurels for its spectacular achievements in the socio-economic space of the district. The vision of

G.S.G.S.K. is the creation of a casteless and classless society referred to as “Sarvodaya society” by Gandhi. In this society, there is political, economic and social equality for all; every person is conscious of his duties and responsibilities and everyone works for the material and moral wellbeing of himself and the society.

The mission of G.S.G.S.K. is to serve the poor and the marginalized villagers through promoting and strengthening their community-based organizations in order to enhance opportunities for employment, income generation, and education, health care and social wellbeing. G.S.G.S.K. has done yeoman service to empower the poor and the marginalized segments of rural population in Alappuzha district. It has extended successfully as an array of services to the people in agriculture, particularly zero budget natural farming and organic farming, rural industries, microfinance, participatory technology development, education, rural housing, health insurance and women empowerment. The microfinance service launched during the year 1996 added synergy to the multifarious development initiatives of the institution. G.S.G.S.K. won wide acclaim for the successful implementation of the people centered programmes like zero budget farming, palliative care of patients, human resource development, Gandhi darsan in schools etc.

Zero budget natural farming aimed to produce safe foods free from pesticides and fertilizer residues which in the long run might induce carcinogenic diseases in human beings. Gandhi darsan was an educational programme to convey to the new generation of student's Gandhian philosophy founded on truth, nonviolence and self-reliance. The efforts of G.S.G.S.K. on human resource development laid stress on capability improvement of the clients in designing, implementing and managing their development interventions.

Thrust Areas of Intervention:

1. Sustainable Agriculture: Since the district has an agrarian economy G.S.G.S.K. works in close collaboration with the small and marginal farmers in moving sustainable agriculture forward. With the guidance and assistance of NABARD, G.S.G.S.K. has been keen on promoting integrated farming system models, organic farming methods and improved agricultural techniques.

2. Microfinance: G.S.G.S.K. launched microfinance service during the year 1997-98 in order to make credit available to the poor and the marginalized segments of the rural population on a large scale, adopting the SHG model developed by NABARD. Through micro finance programme people can organize jobs in their own locations with limited money and natural resources.

3. Livelihood Intervention: G.S.G.S.K. believes that microfinance per se may not bring about economic development although it is an important input in economic activity. The credit has to necessarily invest for gainful employment generation and it could be ensured only by inducing self-help groups to graduate from microfinance to microenterprises. G.S.G.S.K. accomplishes this by transferring skills, technologies and management information to target groups for gainful adoption.

4. Technology Transfer: Technological improvements have made great success in various periods. G.S.G.S.K. adopts participatory action process to accomplish meaningful changes in the livelihoods of the rural poor through training and counseling, action plans, technology transfer and midterm correction in adoption. Experts belonging to the farming and non -farming sectors regularly visits the organization and clear the doubts and give guidance continuously. Grameenaprathana-kendram was founded by G.S.G.S.K. in 2002 to cater the technology transfer needs of the rural community. Kendram also attends to the task of identification, documentation and

dissemination of tradition knowledge in the fields of agriculture, fishery and health care.

5. Market Promotion: Basically the items produced by the groups and members of G.S.G.S.K. have to be sold in the market. To help the micro entrepreneurs G.S.G.S.K. supplies them with resources and market information's and renders assistance to organized marketing groups thereby grooming them as better managers of their enterprises.

6. Women Empowerment: G.S.G.S.K. strives hard to empower women in their fight against discrimination and marginalization. Here members belonging to self-help groups formed an organization known as 'Mochitha' which raised voices and protested against the injustices and the violence faced by women in our society. This initiative will help to create social awareness and togetherness among the women community.

7. Health Caring and Housing: G.S.G.S.K. has launched a holistic healthcare system through a project 'Sarvesanduniramaya' meaning health for all. The poor villagers are also brought under health insurance cover for medical care. G.S.G.S.K. has also been implementing other healthcare programmes like on the spot clinics, palliative care etc..The centre makes available house construction loans to the poor people, in collaboration with reputed financing institutions.

8. Education: G.S.G.S.K. has the mandate for promoting Hindi, the national language. This is achieved by running educational institutions up to post graduate level. Under the leadership of the centre an English medium primary school is working near the head office. In certain places centre has arranged loans from the financial institutions to the children of the G.S.G.S.K. members.

Rural Development Projects of the Centre

1.Swadesi Cluster

Some of the women self-help groups work in the production of various types of soap, washing powder, lotion etc. The Gandhian centre for rural development is giving technical assistance to them.

2.Milk Diary Units and Egg Farming Units

Realizing the scarcity of milk supply in Alappuzha district, the centre took decision to promote milk farming with the help of banks. SBT provides financial assistance to the dairy farmers associated with the G.S.G.S.K.. The centre has also been promoting goat rearing for milk production particularly among the low income groups of women. Women members associated with G.S.G.S.K. are showing more interest to work in the field of egg farming. The project egg for all designed exclusively for rural women has been in operation since 2005-06. The centre is doing all kinds of help like providing advice, financial assistance to the individual farmers in the district.

3.Kora (The tropical grass species Pennisetum clandestinum) Grass Unit

The centre is giving training and technical advice to the members belonging to the Kora grass units. Some of the products made by the units with Kora grass are bags, floor mat, waste basket, office file, cushion and flower vase. The National Institute of Design Development and other financial institutions are also helping and giving guidance to these groups of G.S.G.S.K.

4. Fish Farming and Processing Units

The G.S.G.S.K. established 'matsyasaamrudhi' fish processing and marketing units with the assistance of Japan fund for poverty reduction through disaster management with the objective of creating employment to the fisherman, particularly women in the tsunami affected coastal panchayats. Project

named as 'Makarika' included members of the joint liability groups and they produce various fish products which are ready to cook and serve.

5.Solid Waste Management

G.S.G.S.K. formed twelve vermin clubs which include two hundred people. Here the club members are given proper instructions for using earth worms as an agent for converting solid waste into organic manures. The main aim is to promote the idea that waste produced in our household can be decomposed in an environment friendly manner rather than dumping them on the public places, roads and neighboring places.

6.Industrial Coir Development Cluster

G.S.G.S.K. has taken particular care for starting the coir industrial clusters in the district. G.S.G.S.K. has entered in the field of coir development in 2000 with the objective of empowering small scale producers and workers to take up production, processing and marketing of coir and its products, avoiding totally, the middleman. Infra-structure for coir spinning, dyeing and market promotion of end products was also developed.

Gandhi felt that a strengthened and economically sound rural economy would revitalize Indian economy. He preached hence the 'gospel of rural mindedness. A rural economy of self-contained villages alone could be the basis of a non-violent economy. He felt that small communities molding their lives on the basis of voluntary cooperation would be the best environment for the extinction of exploitation. The regeneration of India he felt to be impossible without village reconstruction. Hence he gave his slogan "back to villages". In small self-sufficient villages producing mostly for their consumption a peaceful life devoted to the pursuit of democratic values was possible. Big urban concentration on the other hand results in the monopolization and accumulation of wealth by a minority.

Economic concentration is bound to lead to political centralization. Centralization in turn supports violence. He was of the definite view that non-violence could be realized not on the basis of a factory civilization but only on that of self-contained villages.

Sustainable Farming in Gandhian Context

Farming Activities of G.S.G.S.K.

Even though Gandhi did not mention anything about the concept such as sustainable development but his actions have supported these aspects on several occasions. This highlights that development is not only for the satisfaction of present generation but also for the future society. G.S.G.S.K. is concentrating their activities on nature oriented things and the wellbeing of the society. They never support the perception like the use of the resources only for today and not for tomorrow. So far we have seen the overall socio-economic activities of G.S.G.S.K., now we examine the sustainable farming practices implemented by G.S.G.S.K. in particular:

1. Farm Sector

Agriculture is the mainstay of economy of the district. It continues to provide shelter for more than 60% of the population. Although estimates indicate that the contribution of this sector to the economy is sliding down due to various reasons. Emphasis is therefore given to empower the farm sector by extending credit and technical support.

2. Annapurna Rice Farming

This is an ongoing programme it was launched during 2005-06 in the vast rice bowl of Alappuzha (Kuttanad) - where farmers had been leaving rice paddies fallows due declining profit margins over a number of years. G.S.G.S.K. successfully persuaded 80 joint liability groups of 616 tenant's farmers to raise paddy in 600 hectares during 2005-06. This program was continued during the following years in different parts of the

district for increasing rice production. During the 2012-13 1715 farmers participated in the program and produced 3822 tons of rice from 873 hectares of paddy fields.

3.Haritha Samrudhi

The program instated during 2005-06 aimed to enhance fruits and vegetable production adopting the following strategies:

- ☐ Vegetable cultivation in homestead
- ☐ Vegetable cultivation on the terraces of dwelling houses
- ☐ Vegetable cultivation in rice fallows
- ☐ Banana cultivation in coconut gardens as intercrop

As per 2012-13 data seven joint liability groups (100 members) raised vegetables in 190 hectares and banana in 72 hectares and 1520 tons of vegetables. Three farmers also started high value vegetable cultivation in green houses under this project.

4. Ksheera Samridhi

Considering the ever green market for milk and milk products in Alapuzha district the project ksheerasamridhi was initiated in 2005-06 with objective of organizing a large number of mini diaries each having three milk animals procured at staggered intervals of three months and barn. Accordingly 130 joint liability groups of women were organised and low priced credit was made available to them. The project did make a clear impact on the farmer's income and employment. Further the diaries met the organic manure requirement of crops in the farms. Even though there was a delay in the repayment of loans and financial shortage during the year 2012-13 milk production is now on the path of recovery.KsheeraSamridhi project also envisaged the popularization of goat rearing in home stead as an income generating activity for women.

5. Egg for all

Poultry farming has been an important economic activity in rural homesteads in Kerala, managed primarily by women. The project egg for all was launched in 2005-06 to gear up this micro agri business confined to the homesteads in the districts. The accomplishment of the project was commendable and therefore it was continued indefinitely. During 2012-13, 1309 farmers reared poultry birds. The rate of production of eggs was in order of 8500 per day, providing reasonably good supplementary income to the farm families, besides satisfying the protein needs

6. Matsya Samrudhi

Matsya Samrudhi Industrial Fish Processing, G.S.G.S.K. established this industrial fish processing unit during 2008-09 with the aim of empowering fisher women in the Tsunami affected coastal tracts. The unit received financial support from the Government of Kerala through Japan Fund for Poverty Reduction. The recently introduced project of matsyasamrudhi is a farming method that successfully integrates solid waste management and profitable fish rearing. Under this programme, interested members are selected and they are provided financial assistance for the construction of the fish tank. And specific variety of fish is provided to them, which feed on the household floodwater, after six months or seven the fish attains complete growth and it can be sold at good price.

Sustainable Farming Activities

Declining soil fertility is a major problem confronting farmers in most of the agricultural tracts. Soil fertility management, therefore, is crucial to the development of farming systems that are sustainable. It is in this context organic farming more particularly natural farming assumes importance. Zero budget natural farming, a variant of conventional organic farming was conceived and developed by Sri. Subhash Palekar of Maharashtra state. It is a system that is environment friendly,

sustainable and the least expensive. Further it ensures poison free agricultural products. Natural farming system makes use of microbial population and the dung of indigenous cows, the earth worms in the natural soil and crop residues for making available plant nutrients thereby reducing the farming expenditure. No input is brought from outside of the farm. In order to popularize zero budget farming in Alapuzha district a NABARD assisted project entitled “Promotion of zero budget natural farming” was implemented during 2012-13. A series of awareness classes were organized in the district in which 724 intending farmers, students, social workers and officers of the Department of Agriculture participated.

1. Bio-Inputs for Crop Production and Protection

Considering the importance of biofertilizers and biopesticides in organic farming system, a laboratory for the production of biological inputs needed in agriculture was established by G.S.G.S.K. in 2006-07 with financial assistance of NABARD. The first product released was Prakruthi ‘fluorescent pseudomonades’, a broad-spectrum antagonistic micro-organism capable of controlling soil and airborne pathogens affecting crop growth and production. Subsequently, the production of Trichogramma egg parasitoids was launched with the technical assistance of the Project Directorate of Biological Control, Bangalore. This is now extensively used in rice fields, particularly in Kuttanad, the rice bowl of the state. In 2010-11, two entomopathogenic fungi capable of controlling insect pests on vegetables and many of the other crops were released: Prakruthi Beauveria bassiana and Prakruthi Verticillium dactylophilum. The only biofertilizer developed and released by the laboratory is Prakruthi Azospirillum. It is a potential source of natural nitrogen enrichment in soil. This input is yet to become popular among farmers.

2. Empowering Farmers

Farmers are considered the back bone of rural economy. Yet they are the most neglected in the society and are destined

to face the consequences of a host of challenges, because climate change declining soil productivity, market risk etc. very often the farmers are prone to leave the field fallow and migrate to the other sectors in search of better job opportunities. Such a scenario, in the long-run will adversely affect the food security of the state. G.S.G.S.K. piloted NABARDS project for empowering farmers to solve the problems confronting them through mutual assistance sharing knowledge and inputs creating market support and mobilizing risk support from their government in their favor. Under NABARDS directions G.S.G.S.K. organized 18 farmers club during 2011-12. The farms club organizes a number of training programs adopting the principle of learning by doing the most important programs among these are: organic farming, zero budget farming, mushroom production, value addition in milk and home farming.

3.Skill Training for Self-Reliance

Grameena Padana Kendhram (GPK) was founded by G.S.G.S.K. in 2002 to cater to the technology transfer needs of the rural community. Further it was given the additional mandate for establishing rapport with development departments, universities, central institutes and reputed rural development organisations, for furthering the cherished goals of the centre. GPK accomplishes human resource development through training based on the principle of 'learning by doing'. During 2013 GPK organized 34 technology transfer programs benefiting as many as 1951 clients from various walks of life. The majority of these programs were sponsored by NABARD under farmer's technology transfer fund.

G.S.G.S.K. works accordingly to the Sarvodaya principles of Mahatma Gandhi. Sarvodaya stands for the good and happiness of all. In such a social system all individuals have equal opportunities for their development. The development approach put forward by G.S.G.S.K. is mainly human centric. The activities and accomplishments of

G.S.G.S.K. aimed at creating a successful self-reliant economy based on Gandhian principles; thereby it provided various opportunities for rural population for improving their human potential.

Activities of the Centre in Regard to Gandhian Ideology

G.S.G.S.K. approach to rural development is clearly decentralized and inclusive in nature. Implemented programs were clearly planned by taking into account the regional and geographical characteristic of the village. Special packages introduced for the upliftment of farmers, traditional fisher men and coir workers and emphasis on village industries are examples of decentralized pattern of development.

Protection of Rural Economy

Centre's main attempt is to strengthen the rural economy and create new enthusiasm, vigor and viability in the rural community. Through preserving and protecting agriculture, G.S.G.S.K. is protecting the rural economy itself. Since Indian rural economy is basically agrarian in nature, its economic stability depends on the sustainable development of agricultural sector. Gandhi had identified this fact, that's why he included and gave special attention to kisans in his constructive programme. Beneficiaries are of the opinion that various sustainable farming practices have enabled them to improve their standard of living by providing them a promising income and it has also boosted their self-esteem and self-confidence. G.S.G.S.K. acts as a bridge between farmers and the financial institutions, so loans are made available to the farmers without much technical difficulties. The centre makes sure that members repay the loan in time and they are properly used for farming activities.

Village Self-Sufficiency and Food Security

The village should be self-sufficient in almost all aspects and that was the concept propagated by Gandhi. Integrated farming practices implemented by G.S.G.S.K. were able to make the rural community self-sufficient in case of food. Majority of Indian villages are deprived from daily basic food requirements, under such circumstances the farming practices of G.S.G.S.K. which helped to attain food security in Mararikkulam require special attention. Milk diary unit, egg producing unit, mushroom cultivating units and other agro based industries etchelp to generate employment opportunities for the rural folk. The money that generated in the village is circulating in its own areas, so that ultimate benefit goes to the entire society.

Zero budget farming aim to produce safe foods free from chemicals, which in the long-run might induce carcinogenic diseases in human beings. It is less expensive and can be applied irrespective of land size. The only requirement is an indigenous cow and its urine and jiggery. So the farmers can produce whatever they need to meet their own needs and surplus which can be distributed within the village economy. This will rather ensure the food security of the village population.

Eco Centric Development

Modern development and industrialization are great threats to the entire world by degrading the environment. Gandhi believed that the universe has enough resources for the survival human beings and at the same time not enough for the greedy. The activities of G.S.G.S.K. in the agriculture sector have given more importance to the eco centric development. They never encouraged the use of chemical fertilizers or pesticides in the farming activities rather encouraged the use of

bio-fertilizers and manure by the farmers. Centre has conducted several experiments in organic farming and bio-fertilization production which has helped to enhance soil fertility and reduce resource exploitation. Farmers are fully satisfied with these less costly farming methods and they say that they are getting sufficient yield from this method of farming.

Creation of a Non-Violent Economy

Since new farming packages are implemented through various farmers clubs, G.S.G.S.K. ensures co-operation among farmers than competition. Since Gandhi's concept of Swadeshi is the economics of neighborhood, self-reliance and mass employment. In a society based on swadeshi principle people will prefer the commodities produced by an immediate neighbor and also the consumer will cooperate with the neighbor in the process of improving the efficiency of production. Economics of neighborhood is effectively carried out by the centre, thus the farmers are able to find market for and sell their agricultural products at a reasonable price. The centre has made good relation with other agencies and financial institutions so that the entire economy would progress in a dynamic level. A decentralized production system strengthens the non-violent nature of the rural economy. All activities of the centre are implemented in the grass root level which ensures the active participation of the rural folk in all people centered programmes. This kind of a non-violent economy can be considered as a foundation stone towards building a sarvodaya order of the society.

Technology Transfer and Empowerment of Rural Folk

G.S.G.S.K. ensures human resource development through training based on the principle of learning by doing. The training is conducted both in farming and non-farming sectors and it has really benefited hundreds of people in Alappuzha. Training, discussions and classes have been on certain areas like dairy farming, poultry, coir making units etc.

and also taking into consideration the priorities of the people. On many occasions' professionals, scientists and experts in different areas have extended their help, service and guidance to the members of the self-employment programme. The training programmes and exposure visits of the farmers club helps the farmers to understand and study various farming practices and it help them to acquire skills which empower them. Skill acquisition is actually an addition made to the human potential, so skill promoting activities help to generate self-confidence among the members. The members used to achieve great level of progress not only in the economic fields but also in the social, moral and personal areas. When compared with me, women have attained more progress in economic and other fields. Now the center's work is more in the grassroots level to bring progress in the rural community.

Appropriate Technology and Rural Uplift

Appropriate technology is the best instrument for the application of Gandhian development. It is self-sufficient, affordable and non-polluting. It is appropriate in terms of its functionality, level of income of the user and the use to which it is put. It is embedded with the social system and does not cause any social dislocation.

Gandhi believes that appropriate technology can facilitate rural development to a great extent by developing need-based technology. The activities of G.S.G.S.K. give life to this idea of Gandhi. There bio-lab which develops bio fertilizers and bio natural agents which can control insect pest affecting crop plants according to the need of the farmers. These innovative practices contribute a lot for the sustainable agriculture development. The Grameen Pradhan Kendhram of G.S.G.S.K. also plays a major role in transferring appropriate technology to the needy people. Many of the beneficiaries are of the opinion that these appropriate technology methods help them a lot to carry forward and revolutionize their farming practices.

Gandhian view of development is clearly sustainable and inclusive in nature. His ideas on development can be summarized as consisting of self-sufficiency, self-reliance, self-control, independence and sarvodaya. Self-sufficiency and self-reliance are necessary in the matter of production of basic needs of life; self-control stands for the control of Meta needs and greed; self-consistency refers to a situation of cognitive equilibrium with one's own culture values and tradition and independence stands for political, social and economic freedom to develop one's own human self and opportunities. Gandhi was trying to give an answer to the three major crisis faced by the market oriented world economy through his development model. They are resource exhaustion, ecological crisis and crisis of man's alienation and disorientation.

Conclusion

Gandhian principles give us the confidence that a better world is possible. The argument that Gandhi's ideas and principles are outdated is not true. It was at time of colonisation Gandhi experimented his ideological weapons, since then the world has changed a lot, new innovations and developments have taken place in all spheres of life. So Gandhian concepts and ideas need a redefinition, but that doesn't mean those concepts and ideas are irrelevant on the present world. By redefining ability of Gandhian ideas, it is proved that, it can be molded into meaningful structure, according to the needs of the changing world.

What we need is an alternative development strategy which would take into account socio- cultural and economic diversities of every village. Such a strategy should be people centered. Gandhi has put forward a development plan for villages which is relevant even today. Gandhian model of ideal village can definitely help the rural poor to escape from the Vicious circle of poverty. Gandhi has designed a decentralized production system for the uplift of villages based on agriculture, village industries and cottage industries. A

production system based on the Gandhian principle of production by masses would provide employment opportunities and sufficient income to rural folk and would create a self-sufficient rural economy. Gandhi has given immense importance to the concept 'appropriate technology', technology that can effectively utilise locally available resources and renewable sources of energy. It is clear that the concept of appropriate technology also includes the scope for research and development. Rural development requires development of new sustainable technologies according to the needs of the rural people.

Sustainable farming practices of G.S.G.S.K. have its root in Gandhian principles. Most of the people in the villages where GSGK functions depend on agriculture, therefore the institution is dedicating its great effort for the development of sustainable agricultural activities. Zero-budget farming is a revolutionary attempt in the field of agriculture, and it is a solution to the present agrarian crisis of rural areas. These farming methods are affordable to poor farmers and are happy with this method of farming. Ksheerasamridhi and Egg for all (other activities should include) programmes have helped the rural inhabitants including women to earn sufficient income and a decent life. Integrated farming practices have helped the rural folk to attain food security. All kind of agricultural practices are environment friendly and provide answer to the problems of so called green revolution agricultural methods. Field studies show that young people are actively participating in farming activities. By organising farming activities through different farmers club, cooperation among the farmers is ensured. Rural population itself provides sufficient market for the agricultural products which underlines the Gandhian principle of economics of neighborhood. G.S.G.S.K. is also providing opportunities for the farmers to sell their surplus product in urban areas at reasonable price. This act as a source of encouragement for the farmers helps them to continue their activities. Bio-lab functioning at G.S.G.S.K. develops bio fertilizers and

pesticides. Bio-lab represents appropriate technology which develops ecofriendly farming inputs. Training programmes arranged by G.S.G.S.K. on various sustainable farming practices among farmers with the help of experts from different fields makes agriculture activities successful and also creates interest among rural people towards farming. Technology transfer and knowledge extension has empowered the rural farmers a lot.

G.S.G.S.K. acts as a mediator between farmers and NABARD. This helps the farmers to get loans at low interest rate for their agricultural activities. Similarly the centre also supports farmers to get loans from other commercial banks. Efficient supervision of the centre enables the farmers to utilize loans effectively and thus farmers are protected from entering debt trap. This practice of G.S.G.S.K. is very significant because many farmers have committed suicide every year when they fail to repay their bank loans. Since agriculture constitutes the backbone of rural areas the sustainable farming practices of G.S.G.S.K. is a model to all villages which would lay a strong foundation for the revival of self-sufficient rural economy.

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3

Role of Institutional Governance in Economic Development-With Special Reference to Marginalized Slum Dwellers in Kerala

Reshma Rajeevan

The fascinating branch of Development Economics revolves around the theories for attaining economic development by the less developed countries. Numerous theories identify variables such as savings, investment, capital accumulation, technology, innovation etc. as key variables for attaining economic development. But hardly does the role of good governance find a deserving role in theories explaining economic development. It is an undeniable fact that good governance occupies a pivotal position in attaining the dream of economic development. Dahal (1996, P.5) stated that "institutional governance applies to the exercise of power in a variety of institutional context, the object of which is to direct, control and regulate activities in the interest of the people as citizens, voters and workers. "In this context, institutional governance is of immense relevance for attaining the dreams of development for less developed countries. Transparency, commitment, accountability, integrity and time-bound completion of development projects comes under the core of institutional governance.

Statement of the Problem

The implementation of development plans often experiences obstacles and in most cases execution of

developmental schemes will not take place as envisaged in the beginning. Though one can attribute many factors responsible for delay in development programmes, the most apparent cause seems to be the fallacies in governance mechanism. But, most often theories in development economics has not placed sufficient importance to this governance factor. In context of India, welfare schemes and other developmental schemes can be systematically implemented with efficient governance mechanism. In this context, the present study tries to draw a positive correlation between effective institutional governance and economic development with special reference to raising the standard of urban poor. The study probes into the role of effective governance in fostering better implementation and thereby making economic development possible in all sense.

This paper intends to establish positive correlation between economic development and effective institutional governance. Since the arena of economic development is vast, this work intends to concentrate specifically on poverty eradication and improvement in standard of living of urban poor especially the marginalised slum dwellers. The uplifting of living standards of slum dwellers seems to constitute a substantial part of economic development. The role of effective institutional governance in ensuring it is analysed with special reference to Municipal corporations, which occupy a central place in decentralised governance. The framework of this project proceeds through analysing the progress of two main central government projects-Rajiv Awas Yojana (RAY) and Jawaharlal Nehru National Urban Renewal Mission (JNNURM) which is intended to tackle the menace of urban poverty and raise the standard of living. Both these projects demand considerable levels of effort and coordination from the Municipal corporations. The link between institutional governance and economic development is examined in this work, through analysing the governance of Municipal Corporations and progress of these projects(RAY and JNNURM).The whole paper thus tries to highlight, the role of

institutional governance in economic development and the need for ensuring the quality and effectiveness of governance for making possible the LDCs to climb the development ladder at a faster pace.

Objectives of the Study

1. To highlight the link between institutional governance and economic development with special focus to urban poverty eradication.
2. To analyse the progress of RAY and JNNURM in Kerala.
3. To find the constraints and pitfalls in governance mechanism and suggest remedies.

Methodology

This study involves a blend of both primary and secondary sources of data. The primary sources of data were obtained by using the following sources. A direct survey of 100 households was conducted. 50 households were selected from the SMP palace colony, Cantonment area, in Kollam district and rest 50 households were selected from Mathipuram Colony, Vizhinjam, in Thiruvananthapuram district. SMP COLONY and Mathipuram Colony was selected because, it was the only slum areas from Kollam and Thiruvananthapuram respectively to be included in RAY project. Random sampling techniques were used to select the households.

A comprehensive and structured questionnaire comprising of both objective and descriptive questions were used for conducting direct survey. A photographic camera was also used as a data collection tool. For analysing the progress of RAY and JNNURM project the provision of Right to Information Act (2005) was also utilized. A direct interview of former and present mayors of Kollam Corporation and Thiruvananthapuram Corporation were conducted. Besides that, a direct interview of both former and present councillors in the

cantonment area where SMP palace colony is situated were also conducted to precisely spot out the limitations of slum development. Telephonic interviews of various councillors (both present and former), officials in concerned corporations were also conducted for gathering primary data on the concerned topic.

Considering the time available along with the vast scope of the topic, use of secondary source of data has become indispensable. Moreover, the use of secondary data from reliable sources has helped immensely in making the presentation holistic and comprehensive. The secondary sources of data have been largely obtained from the following sources. Detailed project report (DPR), submitted by Kollam Municipal Corporation on May 2013 and prepared by Centre of Science and Technology for Rural Development [COSTFORD] City Development Plan for Kollam, Kochi, Thiruvananthapuram, 2014– Ministry of Urban Development and from the official website of Ministry of Housing and Urban Poverty Alleviation, Comptroller and Auditor General Report-Government of Kerala.

Though there seems to be no dearth in studies related to poverty and slum development, studies focussing on policy evaluations seems to be relatively less in the context of Kerala. The review of the existing literature indicates that a meaningful study inter-connecting the latent dimensions of slum issues and urban governance will be highly beneficial for policy making. Thus, there is a need for studies focussing into the delicate framework of slum issues and institutional governance with an analytical perspective. The present study earnestly attempts to analyze these untold and unseen dimensions of the concerned topic

Scope of the Study in Alternative Framework

The conventional theories of development economics pay little attention to the crucial factor of governance. In other words, the governance factor has not received adequate

attention in the developmental theories for less developed and under developed countries. In this context, the project extends its scope broad enough to highlight the unavoidable and inseparable influence of governance on development. Most often, theories for economic development of UDCs and LDCs are formulated by economist of developed countries. This work makes glimpses to the need of formulating our development agenda by ourselves, rather than depending on economist placed in entirely different context to do so. Thus, the scope of this study truly represents an alternative framework for economic development. Despite, 70 years of independence and sustained efforts to eradicate obstacles of development, India is still a developing country and poverty and pathetic standard of living still persist. In this context, this study, by emphasising its look on institutional governance tries to highlight the cause of implementation lags in welfare projects and inadequate performance of governance mechanism. The study is thus of immense significance and is important in the sense that it tries to identify the pitfalls in governance system and tries to offer remedies.

The Role of Urban Institutional Governance in Poverty Eradication

Urban institutional governance is defined as “the sum of the many ways individuals and institutions, public and private, plan and manage the common affairs of the city. It is a continuing process through which conflicting and diverse interest may be accommodated and co-operative action can be taken (definition by UN HABITAT). Good urban governance is a comprehensive term with broad scope. It is indeed a term with paramount significance in the implementation phase than in theoretical level. Good urban governance can be explained in the following terms. Qualitative urban governance is a broad and systematic process in which constant and deliberate efforts are made to enhance the quality of life in cities. Good governance mechanism strives to ensure appropriate and

effective response to urban problems by incorporating accountable local government along with civil society. It also aims to enhance and promote the participation of civil society in city management and thereby ensure decentralized planning and thereby strengthening the pillars of democracy. The main features of urban institutional governance highlights transparency and accountability must be the cornerstone of governance mechanism, active participation of all stakeholders, efficient delivery of services and promotion of local economic development, balanced growth ensuring sustainability and inclusiveness.

Poverty is a perplexing and challenging problem for any country with elevated developmental dreams. India has initiated numerous numbers of steps in formulating plans for eradicating poverty and uplifting slum dwellers from the trauma of inadequate living conditions. But still the policies were not implemented properly. Qualitative urban governance mechanism ensures and safeguards the vision of inclusive development to achieve the quality of life with special emphasis to the marginalized class ie., poor disadvantaged groups. Thus, good governance mechanism in urban areas calls forth for a broad consensus among its stakeholders, namely state, private sector and civic society. The passage of 74th constitutional amendment act in 1992 was first step made to improve urban governance. Good urban governance contributes to sustainable urban development. It brings civic society, private sector and other actors into political process. Through good governance, urban local bodies develop competitiveness, make the city liveable, prudent and efficient financial and management increase rating to facilitate market borrowing for investment on city development. Therefore, good and qualitative urban institutional governance is critical for growth and development. Moreover, effective governance avoid loopholes for corruption, ensures targeted delivery of intended services in a time bound manner. Prevalence of poverty and the factors leading to it can be eliminated to a great extend if the existing institutional

governance is reformed and strengthened. Thus, effective institutional governance seems to a panacea for problems like poverty.

Socio-economic and Demographic Profile of Slum Dwellers in SMP Palace Colony, Kollam and Mathipuram Colony, Thiruvananthapuram

The analysis of slum improvement policies necessitates an overview of the existing socio-economic and demographic dimensions of slum dwellers in the surveyed slums. The following table summarizes relevant information in this regard.

Table 3. 1 Age Composition of Slum Dwellers

Age group	SMP Palace colony, Kollam (in numbers)	% population	Mathipuram colony, Vizhinjam	% population	Total no of individual	% of total
5 years & below	10	5%	18	9%	28	7%
6-24 years	59	26%	70	35%	129	30%
24 -40 years	81	36%	73	37%	154	36%
41- 59 years	47	21%	28	13%	75	18%
60 and above.	27	12%	11	6%	38	9%
Total	224	100%	200	100	424	100%

Source: Primary Data, 2017

Table 3.1 shows that individuals in the productive age group seems to occupy the majority in both the slums and the share of the dependent population in SMP colony is 96 and 99 in Mathipuram colony. In total 46% of the population are dependent.

Table 3.2 Educational Profile of Slum Dwellers

Educational status	Tvpm (in no)	Tvpm (in %)	Kollam (in no)	Kollam (in %)	Total %
Illiterate	18	9	26	12	10.4
SSLC	86	43	48	21	32
Below SSLC	32	16	58	26	21.2
Plus Two	4	2	23	10	27
BA	3	21	10	5	3
School going	45	23	49	22	22

Source: Primary Data, 2017

From Table 3.2, it is clear that the education profile of slum dwellers shows a dismal performance. Tendency to drop education after 10 standard is prevalent. 10.4 % are illiterate and 42.4 percent do not have even qualified SSLC. The percentage of graduates and post graduates in the sample size is negligible and occupies only 4.2 %. In Mathipuram Colony, since main source of livelihood is fishing, the concerned group is hesitant to go for further education. Financial constraints also act as barriers in accessing higher education. 94 out of the total 424 respondents are school going students. But the prospects of this group seeking higher education appears to be dismal.

Table 3.3: Job Profile of Slum Dwellers

Job Status	SMP Colony (in no)	% figures	Mathipuram Colony (in No)	% figures	Total No	Total %
Fisher man	-	-	61	30.5%	61	14%
Coolie	37	17%	-	-	37	9%
Unem- ployed	36	16%	25	12.5%	61	14%
Housewife	41	18%	50	25%	91	22%
Students	52	23%	45	22.5%	97	23%
Children	10	5%	13	6.5%	23	5%
Other jobs	48	21%	6	3%	54	13%
Total	224	100%	200	100%	424	100 %

Source: Primary Data, 2017

The productive capability of the sample space is underutilized. Only 38% of the sample space in SMP colony and 34% of Mathipuram Colony are earning population. The main source of livelihood for slum dwellers in Mathipuram Colony is fishing. Nearly 97% of working people are engaged in fishing. Hence, there is a considerable amount of uncertainty in earning or ensuring a steady flow of income. The job profile in the concerned sample is entirely in the informal sector. There is prevalence of voluntary unemployment among females in Mathipuram. In total 64% from the share of dependent

population. Hence, the benefit of a larger share of working age population is not fully realized.

Digital Literacy

The penetration of digital literacy is negligible in the surveyed slums. The families with at least 1 member knowing to use computer was limited to 8 in Mathipuram and 17 in SMP Palace Colony. Within this computer knowledge was exhibited by youth population ranging between 6- 24 age group.

House Status and Confirmation of Land Ownership

Dilapidated households with leaking rooftops characterized the households in SMP Palace colony. In Mathipuram Colony, the households rehabilitated by the Corporation for implementing RAY project are living in pathetic conditions in congested sheds. Roofs of these sheds are made of aluminium roofing sheets and the residents complain about the unbearable heat inside these sheds during afternoon. Only 24% of family seems to have pattayam. Rest 76% of population do not have pattayam and hence face insecurity and fear of eviction in this regard. 100 % of the households seems to have aadhar card, bank account for at least one family member, and electricity connection.

Water Supply and Sanitation and Waste Disposal

All the 50 surveyed households in SMP colony have access to sanitation facilities. But in case, of rehabilitated slum dwellers in Mathipuram are using common bathrooms. About 90% of households surveyed in SMP Palace colony depends upon corporation tap for water and rest 10 % uses water from tube wells also. The households do not have a pipe connection inside their dwelling units. In the case of residents of Mathipuram Colony, residents are forced to buy water at the rate of Rs 5 per pot, as there is no other option. The water from pipeline is unusable due to the salty content and hence face acute shortage of water. In both colonies surveyed, waste

disposal is improper. The practise of dumping waste in railway tracks in SMP colony and into the sea in Mathipuram Colony are not uncommon. Majority of the surveyed slum dwellers, dispose waste in a common backyard. It has been found that dwelling units of family are so congested. Hence proper disposal and treatment of garbage in their own vicinity is not possible. There are no appreciable attempts from the concerned corporations in the effective disposal of waste generated.

The Implementation of JNNURM in Kerala; With Special Focus on Urban Poor

The important sub mission of JNNURM is the provision of Basic Services to the Urban Poor (BSUP) and it aimed at providing basic services and related civic amenities to the urban poor so as to ensure integrated development. Though the mission was initially targeted for 7 years ranging from 2005-2006 to 2011-2012 later it was extended up to March 2015. BSUP was implemented in Thiruvananthapuram in 4 phases and in Kochi in 3 phases. Fundamentally, the BSUP consist of construction of dwelling units' provision of services like sanitation, water supply etc. The detailed project Report (DPR) of Thiruvananthapuram was prepared by CostFord and for Kochi, it was prepared by C-Earth Ltd. Total number of slums in two cities were 760 (in Kochi-411 and in Thiruvananthapuram-355 slums).The scheme was taken for implementation in 30 slums (23 From Thiruvananthapuram and 7 from Kochi).At the Central level the scheme of BSUP was administered by Ministry of Housing and Urban Poverty Alleviation .The State Level Nodal Agency(SLNA) was the Kudumbasree, the state Poverty eradication Mission. The urban local bodies were entrusted with the responsibility of preparing Detailed Project Report(DPR) and was supposed to submit it to SLNA for appraisal, Kudumbasree was supposed to submit the project to State level Steering Committee (SLSC) for getting sanction and seeking assistance from Government of India. The project was sanctioned by Central Sanctioned and Monitoring Committee.

At the state level the implementation of BSUP was coordinated by the state level Steering Committee headed by chief minister.

Implementation of JNNURM's sub-mission of Providing Basic Services to Urban Poor (BSUP) in Kerala

With respect to the implementation of Basic Services to Urban Poor (BSUP) programme, the audit report reflects the following fallacies, which need to be addressed.

Discrepancies in the selection of beneficiaries: The issued guidelines by the government gives preference to the vulnerable sections of society like members suffering from chronic disease, unwed mother, physically and mentally challenged, landless family etc. The application after prioritising was to be scrutinized by the Community Development Society and the beneficiary was to be approved by Ward Sabha after detailed discussion and further consolidation by ULBs. The approved DPRs contain 23,631 beneficiaries. The audit report by Comptroller and audit general noticed that the corporations did not provide benefits to all included in the beneficiary list and also provide assistance to new beneficiaries by deleting most of the beneficiaries in approved list. The reason for this drastic deviation was not properly documented. Kochi Corporation stated that hasty preparation of beneficiary list, non-availability of land and non-cooperation of beneficiaries forced them to make changes in the beneficiary list But they do not have supplementary documents to support it. It was also found out that the requirements of biometric mapping of identified beneficiaries as per the scheme guidelines were not followed by the two corporations. Thus there is a sheer lack of transparency resulting in the neglecting the intended beneficiaries.

Though the main objective of the scheme was integrated development of slums, the main activity undertaken in both corporations under this scheme was construction of dwelling units, construction and modification of flats etc. These dwelling

units constructed were not confined to the slums, violating the norms. As per the audit findings, the progress of construction of flat meant exclusively for slum dwellers were 1 percent and 39 percent for Kochi and Thiruvananthapuram respectively. Progress made in other areas pertaining to water supply, other community services etc remained far from satisfactory. It has been learnt from mission guidelines that the Central assistance provided under the mission can also be used for financing urban development projects in the PPP (Public Private Partnership Model). The two corporations had not proposed any projects in PPP model except 12 flats constructed in Kochi.

Low Public Participation and Deficiency in the Preparation of DPR: The JNNURM guidelines insist stakeholder participation i.e, the involvement of communities in the preparation of DPR (Detailed Project Report). It was entrusted with the ULBs (urban local bodies) to ensure civil society group or NGOs to organise, mobilise and ensure the participation of urban poor communities in a participatory planning process. However, in both Kochi and Thiruvananthapuram corporations, there was no evidence to verify whether DPRs were prepared through participatory planning. Thus in the absence of local planning, there were local protest, unwillingness of beneficiaries to pool their land for construction. Many projects proposed were not started and remained incomplete. Reasons cities include, non-availability of land, non-cooperation from beneficiaries, delay in getting central assistance etc.

Excess Collection of Beneficiary Contribution: The scheme guidelines explicitly stated that the vulnerable groups of SC, ST, OBC and physically handicapped need to contribute only 10 percent of cost as beneficiary contribution. But the audit report found out that both the two corporations collected beneficiary contribution at the rate of 12 percent of project cost as applicable to general category and from the OBC category on the basis of direction given by Kudumbasree. On being asked in audit, the State Level nodal agency replied that state had made changes in beneficiary pattern. However, no

government order or instructions to support the alteration made was produced.

Non- Completion of Houses After Receiving Assistance: As per the guidelines, within 6 months of the date of disbursement of the first instalment of assistance, individual houses should complete its construction. The guideline further provides that in case of non-completion of the work of houses, then the amount of assistance given to the beneficiary had to be recovered with penal interest of 18 percent. But the audit noticed that 1782 beneficiaries who received assistance during January 2008 to February 2014 had not completed the construction and it explicitly points out the lack of monitoring mechanism existing in the corporations.

Sale of houses after receiving assistance: As per the guidelines, houses constructed under the assistance of the scheme shall not be transferred or sold for the first seven years. To ensure this, the required documents of the house should be kept under the safe custody of the corporation. But there are instances of beneficiaries selling houses before the stipulated period. The corporation noticed this only when it was pointed in the audit.

Problems in Public Service Delivery of Institutional Governance Mechanism under JNNURM

The biggest problem identified was that low autonomy and poor capacity of urban local body. While JNNURM and its submission explicitly given the impression of promoting the agenda of decentralised governance and strengthening the 74th amendment and making ULB s central to planning of JNNURM projects. But in practise, JNNURUM guidelines equated parastatal organisations with elected ULBs and provided these organisations the JNNURM fund. This marked the continued practise of state government diverting municipal functions and funds to parastatal organisations thereby undermining the capacity and functional autonomy of ULBs. Even though ULBs

were not always the recipients of JNNURM funds, they were held accountable for the reforms JNNURM has not done well enough to change state government's reluctance to delve real power to the urban local bodies.

The other main problems include weak financial and technical capacity of Municipal Corporations, failure in empowering the ULBs to augment their financial and technical base, insufficient pool of funds in Kochi through collection of property and taxes, lack of coordination and institutional fragmentation in service delivery. The low level of public participation, deliberate institutional delays, short-sighted perspective, lethargic attitude of ULBs in implementation etc resulted in weak service delivery. With respect to provision of Basic Services to the poor, the internal control system was not at all effective resulting infinite lag in policy implementation.

An Analysis of Progress of RAY Project in Kerala

Rajiv Awas Yojana was launched in June 2011, in pursuance of Government's vision of "Slum free India". The Ministry of Housing and Urban Poverty Alleviation, however replaced the RAY project with Prime Minister AwasYojana. It has been learnt from the official website of the ministry of Housing and Urban Poverty alleviation that the competent authority has decided to discontinue the earlier scheme of RAY. However, already approved projects under RAY where funds were allocated, were given sanction to continue them with the same commitment of central assistance. Remaining projects where under RAY scheme in which no work has been started so far stands cancelled. These projects, however is taken up under the new mission of "Housing for all". It has been learnt that presently only 5 districts in Kerala has been included under RAY scheme, which includes SMP palace colony of Kollam district. Thuruthy, Kalvathy and Konchery colony of Ernakulam district, Mathipuram colony, Vizhinjam in Thiruvananthapuram, Harijan colony in Thrissur district, Malakunnu Colony in Kozhikode district.

The details on the progress of RAY are analyzed according to the replies given by the concerned Municipal corporations using the provision of Right to Information Act. Most of the Corporations were reluctant to furnish adequate details to the questions on the progress of RAY using RTI plea and further appeals on received RTI responses were necessitated. Except Kochi Corporation, the rest four corporations have taken around 35 days to give replies. Most replies given by the Corporations were limited to few key words and were not satisfactory. The reluctance in giving adequate replies, despite furnishing of appeal indicates the failure of the corporations to systematically implement Rajiv AwasYojana Project as intended in the beginning of the project.

The time lag involved in receiving response to RTI application coupled with inadequate response given became the biggest barrier and limitation of the study. The following observations are made regarding the progress of RAY project on the basis of the responses furnished by the Corporation. On the basis of direct survey, it was found that the performance of construction and rejuvenation of dwelling of slum dwellers was not completed in a time bound manner as promised to its beneficiaries. The construction of dwelling units for slum dwellers is progressing in both SMP Palace Colony and Mathipuram Colony. It was also deciphered from the survey that the potential beneficiaries do not possess any precise idea regarding the progress of the project. In both Colonies, the construction work have taken more than the promised period of 18 months and the work is still progressing.

Table 3.4 Activities carried out for improving housing and other basic civic infrastructure

Municipal corporations	Activities carried out
Kochi	Housing component (individual, row housing) started in Thuruthi colony in Kochi Infrastructure component not started.
Kollam	Construction of dwelling units in SMP Palace Colony is under progress
Thiruvananthapuram	Launched slum eradication program based on survey conducted in 179 slums in Thiruvananthapuram. Construction of dwelling units is under progress
Thrissur	In Nellankara Harijan Colony, under RAY,6 new housing units were constructed and renovated 12 houses.

Source: RTI, 2017

The potential beneficiaries in both the colonies do not have any idea regarding when this project will be completed. Comparing to Thiruvananthapuram district, the rehabilitation units constructed in Kollam is far better. The situation is worse in Mathipuram Colony where the delay of the project causes inexplicable miseries to the residents in congested rehabilitation units, which is far from satisfactory. The residents except 5 families in SMP Palace colony were able to finance the cost of rehabilitation by their own means. They used the Corporation allotted rehabilitation centres to keep their luggage as a means of their claim for flats and have shifted to better places. But, the residents of Mathipuram Colony are worse affected as they lack

financial capability to find better rehabilitative units till the completion of the flats under RAY Project. Hence, they are destined to continue their life in the congested rehabilitation units.

Table 3.5 Activities Carried out with respect to Improving Water Supply and Sanitation

Municipal Corporations	Measures to ensure water supply and drainage facility
Kollam	Work under progress
Kochi	Nil
Kozhikode	Under Process
Thiruvananthapuram	Not yet started
Thrissur	Nil

Source: RTI,2017

Table 3. 6 Activities Carried out for Improving Solid Waste Management

Municipal corporations where RAY scheme is implemented	Activities carried out for solid waste management
Kochi	Nil
Kollam	Nil
Kozhikode	Under process
Thiruvananthapuram	Nil
Thrissur	Nil

Source: RTI,2017

The replies on RTI by concerned corporations on the activities done as a part of RAY to improve water supply and drainage makes it clear that they have not done anything substantial to ensure water supply and better drainage facilities.

None of the Corporations have utilised funds effectively to ensure solid waste management. The slums face trauma in waste disposal and it is not an isolated event. The waste disposal under the corporations is not effective. Although funds under RAY are exclusively set aside for waste management, none of the corporations have so far utilised the amount so as to find and implement novel solutions to waste management. Figure 3.1 reveals the plight of waste disposal in the slum area.

Fig 3.1 Improper Waste Disposal, SMP Palace Colony, Kollam.



Source: Primary Data.

Fig 3.2 Sanitary Facility in SMP Palace Colony, Kollam.



Source: Primary Data.

Table 3.7 Current Status of Ray (reply as given by concerned corporations)

Municipal Corporations	Current status of RAY
Kochi	Housing component such as individual housing, rowhousing, etc has been started and is progressing.
Kollam	Work started for individual building and in progress.
Kozhikode	Project started
Thiruvananthapuram	Project in progress
Thrissur	Project in progress.

Source: RTI, 2017

Awareness of Potential Beneficiaries regarding the Progress of RAY Project.

The potential beneficiaries Rajiv Awas Yojana is unaware of the title of the project and funds allocated for it. While respondents were aware of the ongoing construction of flats, no one had any idea about its time of completion or the exact cause for delay of the project. The direct survey conducted among the potential beneficiaries of both the slums reveal that no one has precise idea regarding what exactly is Rajiv Awas Yojana scheme and what are its true benefits, if it is implemented systematically.

Table 3.8 Community Participation in Preparation of DPR?

Municipal Corporations	Whether community participation ensured?
Kochi	Yes
Kollam	Yes
Kozhikode	Yes
Thiruvananthapuram	Yes
Thrissur	Yes

Source: RTI, 2017

All the five corporations under which RAY project is under implementation has responded that, detailed project reports was prepared with the help of community participation. However, the awareness regarding RAY project among the intended beneficiaries seems to be very poor and hence the reply furnished seems to be ironical. There seems to be a necessity of more tangible and vocal participation of the potential beneficiaries. It can be helpful in awareness generation as well as in informed decision making. Moreover, enhanced participation can further contribute to more

transparency and accountability to the implementation of the project in an efficient manner.

Table 3.9 Measures Taken to Expand Institutional Credit Linkage

Municipal Corporations	Measure to expand institutional credit linkage
Kochi	Not Applicable
Kollam	Nil
Kozhikode	Not Applicable
Thiruvananthapuram	Credit linkage facility ensured as per requirements.
Thrissur.	Nil

Source: RTI, 2017

The provision of making available necessary credit to urban poor does not receive deserving importance from the concerned corporation. Three among the five corporations has considered it as 'Not Applicable. Thus it seems that, Rajiv AwasYojana project is bound to suffer all the limitations and pitfalls of its preceding schemes. Like all slum development projects, so far implemented, RAY has been placing heavy importance to construction and rejuvenation of dwelling units in slum areas .The scheme thus neglects core areas with respect to water supply, drainage, sanitation, waste disposal etc. Unfortunately, the construction of dwelling units for slum dwellers upon which exclusive importance is placed upon is also progressing at a slower pace. As a result, the living of people in congested rehabilitation units which was tentatively constructed continues indefinitely. Thus the implementation of RAY need to be more systematic in its execution so as to fulfil its objective to creating a 'Slum free India'.

Suggestions

For effective governance especially in case of implementation of developmental projects particularly aimed at

the wellbeing of vulnerable sections of society, the following should be noted.

Rational and time suited interventions are needed in policy planning and execution. Launching of schemes with similar objectives by withdrawing earlier schemes before completion need to be avoided. Multiple schemes for attaining same objectives may result in deviation of funds and complexities in execution. Hence existing schemes should be rationalized to serve its objectives in a better fashion. The practice of giving exclusive importance to housing component at the cost of improving other areas such as solid waste management, ensuring health facility etc need to be checked. The unholy intention behind placing excessive focus in housing component need to be thus examined and other core components should also be focused well. Further in the execution stage of the project, the issue of delay in implementation need to be addressed. The enormous time lag in the execution is the single most aspect marring the efficiency of the whole developmental project. All possible measures should be undertaken with due diligence to complete the projects within the prescribed time period. Root cause of lag in implementation should be found out and should be eliminated.

Most of the slum development project involves delegation of some aspects of the projects to consultancies on a tender basis. The whole process of tender allocation and way in which the tender is executed should be made more transparent. In case of malpractice with the intention of causing loss to government exchequer or creating troubles to targeted beneficiaries, effective legal action need to be pursued. Participation of representatives of beneficiaries shall be considered in the process of tender allocation

Performance and productivity of employees in government sector need to be evaluated on a consistent basis, so as to enhance the competitiveness of the employees as well as the efficiency of the government machinery as a whole

Thereby, accountability and responsibility of the employee can be ensured and maintained. Also, all possible efforts should be ensured to safeguard the employees from unnecessary political or other vested interferences with their work.

The responsibility of implementation of project should be specified clearly. In case of inefficiency or flaws in implementation, whom shall be held responsible and answerable should be precisely defined. Such a well-defined framework can enhance the efficiency in execution. In addition to it, continuous and comprehensive monitoring of every developmental project should be done and mistakes should be rectified as immediately as possible. Further legislations should be exercised effectively and amended rationally to ensure that progress and quality in the implementation of development al projects are not compromised.

To ensure the systematic execution of the projects, more focus on stakeholders' participation should be given. Better interaction and meaningful communication accompanied by exchange of ideas should be made between the people's representatives and people of slum areas. This can help to solve the problem of information divide and it also ensure better participation of slum dwellers in governance mechanism. Periodic meetings between the concerned parties can be organized in this regard. Effective and systematic awareness campaigns on diverse topics including health, hygiene, legal and financial awareness etc. must be conducted in slum areas. Measures should be taken to enhance civic consciousness and knowledge regarding duties and responsibilities of slum dwellers.

Along with correcting deficiencies in implementation of slum improvement schemes, empowering the urban poor is also equally important. With respect to empowering the slum dwellers to break the vicious circle of poverty the following things can be noted;

Provision of tenancy rights to slum dwellers can help in wiping out their fears of rehabilitation. Also, once they lose their fear of being evicted, the slum dwellers can work to improve their quality of life with increased confidence. The fear of rehabilitation acts as a restraint for slum development. Hence urban governance mechanism should be able to devise suitable rehabilitation strategy that is capable of eradicating the fear of eviction among slum dwellers.

The information divide and lack of awareness among slum dwellers need to be addressed. This can further enhance the quality of their participation in planning and execution of the project. The surveyed slums represent a considerable share of youth population. The population dividend should be channelized into productive uses. Skill generation should be given priority and training programs should be organized in slum areas with the aim of improving the economic status of slum dweller. This should be treated as an opportunity and massive skill acquisition and job-oriented training can be conducted to tap their potential. Also, to improve the quality of job profile, self-employment should be given adequate attention. Financial assistance can be provided in this regard. Also, campaigns, training program etc. must be organized to create digital literacy among the slum dwellers which seems to be indispensable in the cyber world.

Efficient and strict mechanism is needed to check whether the intended benefits of welfare schemes are reaching the target population. Proper measures should be taken by the concerned authorities to address the problem of discrepancies in the provision of APL and BPL cards. Steps should be taken to include the deserved and exclude the undeserved from BPL card holder's list. Moreover, strict follow up mechanism is needed to track the progress of projects like RAY on each district. The mass media should effectively use their platform to portray the pictures of problems faced by slum and echo their voice of concern. Thus media (both visual and print) can invite

the attention of the mainstream society to the marginalized slums.

Conclusion

An evaluation of developmental schemes like JNNURM, RAY etc aimed at upgrading living standards of urban poor points to the fact that it is neither the lack of plans nor funds which poses a problem. Unless and until these schemes are effectively governed and benefits are ensured to reach the targeted group, similar schemes with same idea arrives indefinitely in different names, without attaining the actual objectives. If innovative policy planning and creative formulation of slum eradication programs failed to offer sustainable solutions, then what is to be blamed is nothing other than the implementation strategy. Inefficiency coupled with lack of accountability has seriously hampered the quality of implementation. It is to be noted that, if still the sincere grievances of the slum dwellers continue, the reason responsible is never the lack of adequate fund, but the fallacies in its effective utilization. The remedy to the multitude of pleas and problems of slum dwellers lies in the effective utilization of funds allocated. Unless and until, the pathetic plight of slum dwellers and other marginalized sections of the society are addressed; the highly acclaimed word of development can never be achieved in its true sense. For this, a well-coordinated and systematic approach is needed between the urban governance mechanism and these marginalized sections of society. Moreover, the support and initiative from the part of mainstream society can work wonders in the successful implementation of welfare programs targeted at the upliftment of the marginalized class. Thus, the persistence of urban poverty manifested through the existence of slum to this day is thus not because of the lack of deep sighted plans or unavailability of funds. Thus, one should note that effective governance has in fact a crucial role to play. With effective governance as a tool, the present pathetic condition of slums, characterised by congested, dilapidated living conditions can be

transformed into an acronym SLUM which stands for Smart Living in Urbanised Modern Spots.

The importance of institutional governance is not restricted to eradication of urban poverty alone. In all diverse spheres improving productivity, profit, employment, welfare etc, governance is an important factor. In the absence of good and effective governance, it is impossible to attain development in its true sense, even in the abundance of innovative plans and abundant resources. Thus, in the absence of effective institutional governance, it is impossible to implement developmental plans with welfare orientations in the desired manner. Thus, one can undoubtedly point to effective governance as an indispensable factor of economic development. Thus, effective institutional governance is positively correlated with economic development.

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4

Commercial Surrogacy – Legal Lacunae and Socio-Economic Considerations

Devisree G.S

Surrogacy is a complex situation where application of technology is assisted in the reproductive process. In this process, multiple actors of diverse social and economic conditions are involved at multiple levels. One has to understand surrogacy, with the understanding of all these complexities. The politics of technologies can act in binary opposite ways – either as a control measure to female sexuality or to emancipate women from the reproductive burden.

“Surrogate” is originally a Latin word meant a substitute or a person acting in place of another. Thus surrogacy is the process of carrying and delivering a child for another person. Surrogate motherhood is defined by the New Encyclopedia Britannica as the practice in which a woman bears a child for another couple (Commissioning couple) who are unable to produce children in the usual way of reproduction. Based on its procedure, surrogacy can be traditional or gestational. In either of these procedures, the surrogate mother has to relinquish all parental rights on the child. Surrogacy is not defined anywhere in the legislative provisions.

Commercial Surrogacy

Surrogacy is divided into two based on the monetary compensation involved in it. A surrogacy agreement where a surrogate is paid for her effort is called commercial surrogacy. There will be a fixed amount paid to the surrogate other than the medical and insurance expenses. Where no such

reimbursement is there, it is called altruistic surrogacy. Surrogacy has been reported in India from early 1990s, but gathered nationwide attention with the judgment in *Baby Manji Yamada vs. Union of India (UOI) and Another* (famously known as Baby M case).

The surrogacy industry in India is valued at more than \$400 million, with over 3,000 fertility clinics nationwide (Report by United Nations, 2012). Most recent studies noted hike that the industry has a worth of \$500 million and \$2.3 billion annually, with approximately 5,000 surrogate babies born in India every year. As per the report, there are more than 30,000 clinics in and around India. The rapid expansion of this industry in India can be attributed to a combination of factors such as rising infertility rates, comparatively lower cost of medical procedures, easy availability of surrogates and lack of government procedures due to the market being largely unregulated.

Statement of the Problem

Infertility, though not life threatening, can cause intense agony and trauma to the infertile couples. Out of the population of 1020 million Indians, an estimated 25 per cent (about 250 million individuals) may be conservatively estimated to be attempting parenthood at any given time. By extrapolating the WHO estimates, approximately 13 to 19 million couples are likely to be infertile in the country at any given time. These couples approach ART Clinics.

One third of the world's poor people live in India. Around 32.7 per cent of people live below the poverty line with an income of US\$ 1.25 a day (Poverty & equity 2015). India has rapidly grown into a main destination for surrogacy why because Indian surrogates are increasingly popular among foreigners because of their easy availability and relatively low cost of payment. There is a competition going on between the ART clinics in hiring and retention of these surrogates and in their pricing. Clinics fee in this regard will range to three to

sevenlakhs for their complete package. Thus, a surrogacy in India cost only one third of the other developed countries including their ticket fare, cost for the medical procedures and others (Jayaram, 2008).

The law related to surrogacy is complex and rigid. The Surrogacy Regulation Bill questions the reproductive rights of a woman. Right to life under Article 21 enshrines the concept of right to reproductive autonomy where the right to procreation and parenthood are inclusive of it. This is definitely not under the domain of the state and is a clear interference into the fundamental right of the citizen (Deonandan 2015).

Large volumes of research studies are available on the surrogacy, legal lacunae and rights perspectives of both surrogate woman and the child. Some of them are studies conducted in India and some are overseas studies. Limited studies are available in the context of alternative economics scenario. The present study attempts to fill the gaps in the specified subject matter. Hence, the present study looks into legal lacunae in the existing legal system for the regulation of commercial surrogacy and the ethical and economic concerns of commercial surrogacy in the society.

Objectives of the Study

The following are the specific goals of the study:

- ❖ To evaluate the legal lacunae in the existing legal system for the regulation of commercial surrogacy.
- ❖ To examine the ethical and economic concerns of commercial surrogacy in the society.

Methodology

The study is employed with empirical use of both primary and secondary data. Primary Data were collected through extensive fieldwork. Both Structured and unstructured interviews were conducted for primary data collection. Other qualitative methods, such as case study and observation method

were also used. Both qualitative and quantitative methods were used in the analysis of data. The study looked into; the legal lacunae associated with commercial surrogacy, its social and economic considerations in the society.

The secondary data will include relevant case studies on surrogacy. The data will be collected through authoritative texts like legislation, case law and doctrinal literature and from various e-data sources. The methodology adopted for this study will be exploratory research of the social and legal aspects involved in commercial surrogacy through the means of a survey. Case studies on surrogacy conducted in Samad Hospital, Trivandrum are incorporated to analyse the ethical and economic implications of surrogacy in the society.

Commercial Surrogacy: - Understanding the Legal Lacunae

No uniform law is available in India on regulating the practice of commercial surrogacy. With the uprising of medical tourism in the country, there is a huge raise in the number of people opting for ART for the realization of parenthood. Since, there are ambiguities in the provisions of law, frequent legal battles have been fought in cases of surrogacy. Further, the existing uncertainties have made the law more complicated. In the present context, where the Surrogacy regulation bill is tabled in the Rajya Sabha, it is of great relevance, a study analysing the legal lacunae, social and economic considerations is conducted.

A complete ban on commercial surrogacy is a thrust into the thriving medical tourism in the country and the people associated to it. The countries that have experimented with altruistic surrogacy have proven out that this only increases the black market transactions underground. Surrogacy as an exchange can be a mutually beneficial and very empowering experience, if practiced correctly with the appropriate guidelines and protections in place (Harrison, L. 2016).

Legislation that primarily protects surrogate mothers will allow India to optimally harness the benefits of the commercial surrogacy industry to mutually empower the surrogate, client, and nation.

Legality of Surrogacy Laws in Various Countries

It varies from country to country. Countries such as France, Germany, Italy, Spain, Portugal and Bulgaria prohibit all forms of surrogacy. India legalized surrogacy in the year 2002. But restrictions to foreigners coming to India for surrogacy was applied by a circular issued by the Ministry of Home Affairs in the year 2015.

Table 4.1 Legality of Surrogacy

No Surrogacy	No Commercial Surrogacy	Surrogacy Allowed
France Germany Italy Spain Portugal Bulgaria	Canada Denmark New Zealand UK Australia China Greece Israel Japan Netherlands Norway Sweden Switzerland	Georgia Ukraine Russia Cambodia US states (Some) India Thailand Mexico Nepal Poland Georgia

Source: An Overview of Surrogacy Around the World. Nursing for Women's Health, ARMOUR, K.L. (2012)

Countries like Georgia, Ukraine, Russia, Cambodia, US, Thailand, Mexico, Nepal, Poland, Georgia permits surrogacy. These are some of the favorite surrogacy hubs among the world. Whereas countries like France, Germany, Italy, Spain, Portugal and Bulgaria prohibit the practice of

surrogacy of any type. Canada, Denmark, UK, Australia, China, Greece, Israel, Japan, Netherlands, Norway, Sweden and Switzerland banned commercial surrogacy. Netherlands, UK, South Africa and Greece allow only altruistic surrogacy in their country.

Payment to the Surrogates

In countries including the UK, Ireland, Denmark and Belgium, surrogacy is allowed where the surrogate mother is not paid, or only paid for reasonable expenses. Paying the mother a fee (known as commercial surrogacy) is prohibited. The following table 4.2 is a country wise comparison of payment to surrogate engaging in commercial surrogacy.

Table 4. 2 Payment to Surrogate

Payment to the surrogate	India	Nether lands	UK	South Africa	Greece
Medical expenses	Yes	No		Yes	No
Insurance coverage	Yes	Yes		Yes	No
legal charges	No	Yes		No	No
Reasonable expenses,	No	Yes	Yes	No	No
loss of earnings	No	No		Yes	Yes
Expenses related to pregnancy and postpartum period	No	No		No	Yes

Source: Study by European Parliament, 2013

All these five countries provide the medical expenses and insurance coverage to the surrogate. Netherlands, UK and Greece categories the expense into the name of reasonable expenses out of which Greece provide expenses related to any loss of earnings to the surrogate. South Africa also added this provision. Whether medical expenses and insurance coverage is enough for a surrogate is the major concern. Commercial surrogacy or surrogacy for gain is a term that needs

fundamental alteration. Instead, the name compensated surrogacy will give a much better picture.

Legal Guardian of the Surrogate Child

Guardianship is a much-discussed issue in case of surrogacy. As surrogacy is a process involving many, issues regarding guardianship always arose. There are contradictions with the provisions in the legislations and surrogacy arrangements in this regard.

Table 4.3 Legal Guardian of the Surrogate Child

Legal guardian of the surrogate child	India	Netherlands	UK	South Africa	Greece
Intending Parent (s)	Yes	No	No	Yes	Yes
Surrogate (transfer of guardianship through adoption or order)	No	Yes	Yes	No	No

(Source: Study by European Parliament, 2013)

Countries including India, South Africa and Greece gave the legitimacy of parentage and guardianship to the intending parents or the commissioning couple. The surrogate has to transfer her ownership through adoption and should handover the child to the intending parents after birth in countries like Netherlands, and UK. The same was the practice in India before the introduction of the Surrogacy Regulation Bill.

Imprisonment on Violation

The following countries practice altruistic surrogacy and completely prohibit commercial surrogacy by their legislations. Rigorous punishment has been provided under the penal laws to those who violate the provisions of the legislation.

Table 4.4 Imprisonment on Violation

Country	Maximum Imprisonment
India	10 Years
Netherlands	One Year
United Kingdom	Three Months
South Africa	Ten Years
Greece	Two Years

Source: Study by European Parliament, 2013

As per the provisions of the new bill on surrogacy, the punishment for engaging in commercial surrogacy is a maximum of 10 years, which is in par with that of South Africa. Netherlands have the maximum imprisonment of one year and Greece of two years. In UK, the maximum punishment for engaging in commercial surrogacy is three months.

Existence of a Medical Reason

Surrogacy is preferred when there exist a medical reason that results in infertility or inability to conceive due to any other reasons. This completely blow off the chance for fashion surrogacy where couple opt for surrogacy, since they are unwilling or obsessed to conceive due to personal choices.

Table 4.5 Existence of a Medical Reason

Existence of a medical reason	India	Netherlands	UK	South Africa	Greece
Infertility	Yes	No	No	No	No
Uterine disorders	No	Yes	No	No	No
Inability to bear a child	No	No	No	No	Yes
Permanent inability	No	No	No	Yes	
No requirement	No	No	Yes	No	No

(Source: Study by European Parliament, 2013)

All these countries made it mandatory that there should be a medical reason to refer a patient for surrogacy. The reason may range from infertility, uterine disorders, and inability to conceive. There can be other reasons to the list. In UK, there was no such requirement. This indicates that people are given the freedom of choice to opt surrogacy or not.

Requirement of Being Married

In India, as far as the present scenario is considered, an Indian heterosexual couple married for five years and is unable to reproduce by sexual means can only opt for surrogacy. Thus, here the requirement of marriage is compulsory for opting surrogacy.

Table 4.6 Requirement of Being Married

Country	Requirement of being married
India	Yes
Netherlands	No (single male/female allowed).
United Kingdom	No (includes civil partnerships).
South Africa	No (single male/female allowed).
Greece	No (single woman allowed).

(Source: Study by European Parliament, 2013)

The requirement of marriage is mandatory only in the legislation of India and in all others single parent can opt for surrogacy. Such a deprivation without reasonable classification is discriminatory to the unmarried couples and single parents. In UK, civil partnerships are allowed to opt for surrogacy as per their law. This is a form of civil union granted under the Civil Partnership Act 2004, allowing couples irrespective of sex to obtain essentially the same rights and responsibilities as civil marriage (The Guardian, 2018). Such partners are entitled to the same property rights as married couples, the same exemption as married couples on inheritance tax, social security and pension

benefits, and also the ability to obtain parental responsibility for a partner's children ,as well as responsibility for reasonable maintenance of one's partner and their children, tenancy rights, full life insurance recognition, next of kin rights in hospitals, and others(Walker, Peter 2013).There is a formal process for dissolving partnerships akin to divorce (BBC.2006).

Eligibility Criteria for Surrogate Mother

The eligibility criterion for a surrogate mother varies with country. However, there are some common criterions applicable for all. The eligibility of surrogate based on age, relation to the commissioning couple, requirement of marriage and children, the number of times one can be a surrogate, and the consent to be sought are detailed in the table 4.7.

Table 4.7Eligibility Criteria for Surrogate Mother

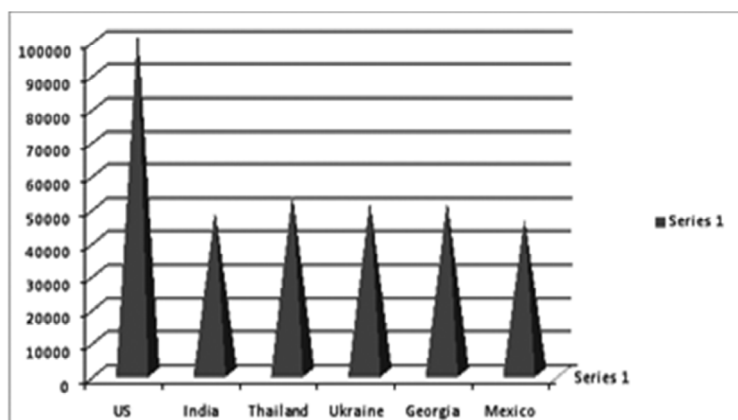
Country	Relation to Intending parent (s)	Age	Requirement of being married	No. of own children	No. of times one can be a surrogate	Consent of the partner
India	Close relative	25-35 years	Yes	At least one	Once	No provision
Nether lands	No.	<44 years	No.	At least one.	No restriction	Not required
United King dom	No.	Not specified	No.	No require ment.	No restriction	Not required
South Africa	No.	Not specified	No.	At least one.	No restriction	Required
Greece	No.	Not specified	No.	No require ment	No restriction	Required

(Source: Study by European Parliament,2013)

In India, as per the upcoming bill, the surrogate has to be a close relative of the commissioning couple. No such requirement was found in the other countries. The clause of 'Close Relative' is not explained further. The age of a surrogate should be between 25-35 years in India and less than 44 years in Netherlands. In other countries, this requirement of age is not specified. In India, a surrogate has to be married with at least one child of her own. No other country has the requirement of marriage in their provisions. However, at least one child of their own is specified under the laws of Netherlands and South Africa. No restriction as to the number of times one can be a surrogate is provided in the other countries except India. In South Africa and Greece, the consent of the surrogate's husband is required. Even though no such provision of consent was there in the bill, in India agreement on surrogacy requires the consent of surrogate and her husband too.

Destinations of Surrogacy

US, India, Thailand, Ukraine and Russia are the most popular countries opted by the intended parents for surrogacy. Those included in the second priority are Mexico, Nepal, Poland and Georgia. This selection is based on many factors such as the difference in costs, the number of IVF cycles needed, preference of health insurance etc. Australia and Western Europe has developed tight laws which makes very difficult for the surrogate mother to make the money from commissioning parents.

Figure 4.1 Average Cost of Surrogacy

(Amount in Dollars)

Source: An Overview of Surrogacy Around the World. Nursing for Women's Health, ARMOUR, K.L. (2012)

India and Surrogacy

In the Old Testament, there was Hagar, the maid of Sarah, who bears the child for her infertile mistress – Sarah - with the help of Sarah's husband Abraham. Surrogacy can be also traced back to the epics like Mahabharata, where Rohini bore the child for Devaki and Vasudeva. "The Vatican is against surrogate mothers. Good thing that they did not have that rule when Jesus was born is an interesting quote by Elaine Boosle on surrogacy.

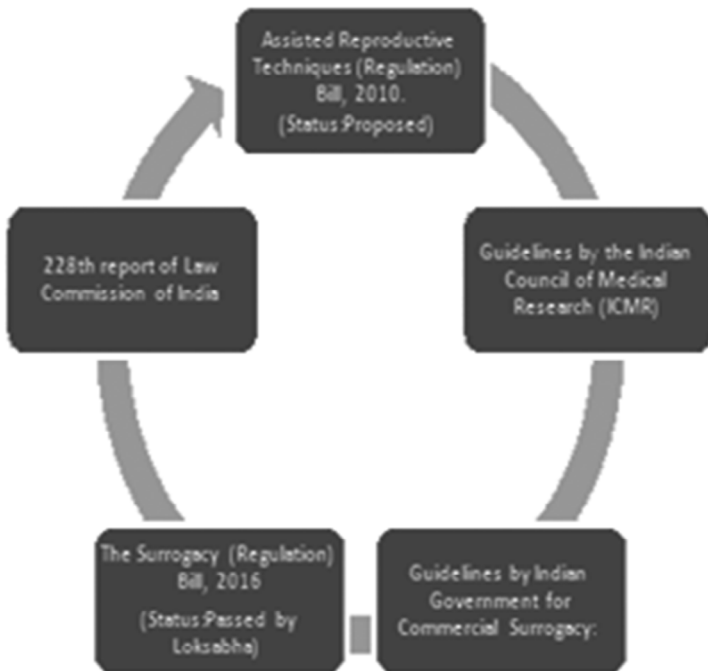
India was amongst a handful of countries that have legalized commercial surrogacy, and was poised as the global leader in providing surrogacy services to couples worldwide. Even though Commercial Surrogacy was allowed in India since 2002, no legal status was gained. It was in the year 2008, the Honourable Supreme Court of India, in the case *Baby Manji Yamada vs. Union of India (UOI)* and another took a

decision in favour of surrogacy, which put forward surrogacy to have a place in the legal context of the country.

Laws Related to Surrogacy in India

India is a hub of medical tourism including surrogacy. There are various factors attracting couple for surrogacy in India. Attractive packages, accuracy and safety of treatment, affordable prices, availability of surrogates etc are some among them. As much the money flows, as much will be the chance of exploitation. The use of new technology has put forward many complicated issues to the judiciary. One among was surrogacy.

Figure 4.2 Surrogacy Laws in India



Source: Compiled by the Researcher (2019)

The Indian council on Medical Research on 2005 came up with the Indian Council of Medical Research (ICMR) Guidelines that were required to be followed by all the hospitals and clinics following surrogacy. As the enhancement of medicinal science was beyond imagination, there arose an immediate need to regulate conceptive technologies or techniques of third party reproduction. The Assisted Reproductive Technology (ART) Technologies which started in about 1999 has reached a turning point, on September 13, 2008, when in a national consultation on “Assisted Reproductive Technologies (ARTs): Emerging Concerns and Future Strategies’ organised by Sama Resource Group for Women and Health in New Delhi, ICMR introduced the Draft proposal of Assisted Reproductive Technologies (Regulation) Bill & Rules 2008. This was the first of its kind, was still in pipeline, and was amended successively in the years 2008, 2010 and 2013 respectively. It was totally based on the ICMR guidelines issued in 2005. Then in the year 2009, the law commission in its 228th report put the first indication expressing the need for surrogacy regulation in India forward. Then, later in 2016, with the aim of curbing exploitation on commercial surrogacy, the Surrogacy Regulation Bill was introduced. The Lok Sabha passed this.

Indian Council of Medical Research (ICMR) Guidelines, 2005

The main features of the ICMR guidelines are as follows:

1. Compensation to surrogates
2. The surrogate mother cannot donate her own egg for the surrogacy.
3. Surrogate has no parental rights related to the child.
4. Life insurance will be there for the surrogate.
5. One of the commissioning have to be a donor.
6. The Contract law will be governing the surrogacy arrangement among parties.

7. A commissioning parent who is single have to be a donor, if he/she wishes to have a surrogate child.
8. Such an arrangement should provide for financial support for the surrogate child in the event of death, divorce or any uncertainty in future.
9. Right to privacy of parties involved.
10. Legislation should recognize a surrogate child to be the legitimate child of the commissioning parent(s).
11. The Medical Termination of Pregnancy Act 1971 should govern cases of abortions only.

Assisted Reproductive Technologies (Regulation) Bill, 2008

Nonetheless, from the day commercial surrogacy was legalised, the Government of India have been keen to pass the Assisted Reproductive Technology (ART) Bill (2008, 2010 and 2013) versions (Rudrappa, 2015; Thapa, 2012).

- Regulations for sourcing, handling, and record keeping of all human reproductive materials.
- National as well as State level authority to register and regulate the IVF clinics and ART centers.
- A forum to file complaints for grievances against clinics and ART centers.
- Rights and duties of Surrogate and commissioning parents listed out.
- Duties and responsibilities on the clinics and ART centers should be imposed.
- Stringent penalties for breach of the duties and regulations under this Act.

228th Law Commission Report, 2009

The 228th report of Law Commission of India promulgated that commercial surrogacy has to be completely prohibited whereas altruistic surrogacy has to be legalized. The report asserted that poverty was the root reason for the booming up of surrogacy industry in India

The Surrogacy (Regulation) Bill, 2016

Introduced in Lok Sabha on November 21, 2016 and on January 12, 2017 it was referred to standing committee. Thereafter on August 10, 2017 the committee gave its report on the same to Lok Sabha and on the basis of that report Lok Sabha passed the bill on December 19, 2018. It was deferred in Rajya Sabha for recommendations on November 20, 2019.

1. It aimed at the prohibition of exploitation of the surrogate mothers and children and preventing the commercializing of surrogacy.
2. The Bill provides for a 10-month period of which would be considered as gestational period, to ensure that no inconvenience is caused to the surrogate mother or to the intended parents.
3. It only allows ethical altruistic surrogacy to the Indian married couple who are infertile (Female -23-50 years, Male 26-55 years).
4. Commercial surrogacy has to be banned. National and State level surrogacy boards should be established to ensure that the intending couples should not abandon a child born out through surrogacy under any condition.
5. Infertile Indian Couple married for five years only eligible to opt for surrogacy.

Recent Developments and Debates

Union Health Minister Harsh Vardhan introduced the Surrogacy (Regulation) Bill 2019, in the Upper House on November 19, 2019. The Lok Sabha in the Monsoon Session has passed it. The minister in his speech has pointed out that this is complicated bill. He added that everyone agree on the fact that surrogacy should be regulated but nobody knows in what form? He reiterated that the Surrogacy regulation dealing with surrogacy should have come after the ART bill, which deals with its roots, the technology. The Rajya Sabha members on November 20, 2019 demanded to add their

recommendations in the Surrogacy (Regulation) Bill 2019. The important debated Clauses include:

1. The practicality of the close relative clause in the present bill.
2. That the commissioning parents have to be infertile and married for five years. Age period of five years in case of late marriages should be reconsidered
3. Legal provisions on various allowances and insurance together with maternity leave for the surrogate mother, besides relaxation in numbers of surrogacy.
4. Permitting abortion within 90 days. Post approval provision has to be there and in case of medical emergency, she should have the right to abort earlier or later, as the case may be.
5. Imprisonment provision for 10 years is rigorous.
6. Non Resident Indians (NRIs) opting for surrogacy in India should be considered.
7. Ignoring the rights of same-sex couples and those in live - in relationships
8. Medical aid, insurance and other benefits for surrogate women
9. Regulation of the 3,000 clinics in the country dealing with surrogacy
10. Doctors are needed in the State and national level regulatory boards.
11. The surrogate needed particular provisions for her wages, nourishment for baby and her food, maternity leave for those government employee surrogates.
12. The bill failed to serve its prime object of curbing the menace of exploitation of surrogate mothers but will end up in exploiting them more.

Lacunae of Surrogacy (Regulation) Bill

The present proposed bill is clearly away from ground realities. It is sarcastic to think being non-commercial, altruistic surrogacy will be ethical. Such a complete ban curtails the rights of women surrogates. The basic assumption in the

present bill itself is flawed assumption. As per the bill, if commercial surrogacy is banned and then for altruistic surrogacy, a surrogate, should be a married with one child and be a close relative to the commissioning couple. When the amount of pressure exerted by the marital and natal families even for normal pregnancy is exhausting, did the government really expect women would not be forced into being surrogates against their will? What is the recourse against such coercion and family violence suffered by those women then? In an Indian society, where infertility is nothing short of taboo, can womb sharing between close relatives become a reality? Any such relative who will be coerced into this labour and expected to do this free. Will that simply displace exploitation in this regard?

Therefore, Surrogacy should not be thrust onto close relatives who may be subject to coercion or intimidation, but organized in a way that ensures that the reproductive workers and their families are justly recompensed and protected with meaningful and substantive medical and life insurance and entitled to make free and informed choices about the procedures they are asked to undergo. It would be right to say that, the bill was poorly drafted and is incapable of protecting the rights of the very people it supposed to safeguard. It is not sensible to think that the impact of closing down commercial surrogacy could boost the adoption rates in India. It is such a fervent hope that this legislation would erode people's preference for biologically related children. In the Indian scenario, the psychosocial and affective structures that drive the desire for their own children are different.

It cannot be denied that some people deserve to access surrogacy services, while others do not. What is important is to understand that those who commission surrogacy do so, not because they are too lazy or vain to carry their own child, but because they are suffering from forms of structural infertility such as the absence of a womb or uterine abnormalities. Above all else, they long to carry their own children. In such cases, a

surrogate is a last resort, not the first. Some women are psychologically suited to undertake surrogacy and others are not. It is right and appropriate that such women should be allowed to undertake such work in the interests of family building as long as their employment is suitably compensated, robustly regulated and performed within licensed clinics that are monitored by an independent regulatory body akin to the U.K.'s Human Fertility.

Every time, it is not possible to use the commissioned parents genetic components It should not be mandatory that a child should not be a genetic descendant of the surrogate. If a surrogate is fertile, and the commissioning mother is unable to provide eggs, why artificial insemination through surrogates eggs be used? Such heinous trials and tribulations of highly invasive medical procedures should not be allowed at any cost.

The bill states it all “Married Infertile Indian Couples”, for over a period of five years. So what do the others supposed to do? Those who are single, live-in couples, or transgender. The present bill is a clear rejection of the idea of self-determination. It is not the state to decide whether a family be formed within heterosexual marriage only and not otherwise. Taking autonomy over the lives of those people who are marginalized by their gender and sexuality is not what is expected. The five-year time bar is yet another distressing clause and this simply increase the hardships of intending parents. It is simply arbitrary, discriminatory and without any definable logic. It amounts to a breach of basic fundamental right to reproduction and the right to privacy.

If there are woman who are ready to be surrogates, nonpayment for their labour is clear violation of their basic rights. Why the burden of altruism is targeted on those marginalized sects of poor woman. It is not expected from the legislative to ban the right to choose of an individual but to ensure their safety and protection from exploitation once they are into this sort of employment. A blanket ban always ends in

increasing the exploitation by creating underground markets. The human and legal rights of the surrogates are to be protected is the need of the hour.

Economic and Ethical Concerns of Commercial Surrogacy: Case Studies

India was amongst a handful of countries that have legalized commercial surrogacy, and was poised as the global leader in providing surrogacy services to couples worldwide. India's commercial surrogacy industry had reached an estimated worth of US\$2.3 billion in its thirteen years of legalization (Das Gupta & Das Gupta 2014). The worth of commercial surrogacy in India is calculated to be worth more than \$1billionn a year. The usual fee is around \$25000 to \$30000 in India, which is around 1/3rdof that in developed countries like USA. This has made India a favorable destination for foreign couples who look for a cost-effective treatment for infertility and a whole branch of medical tourism has flourished on the surrogate practice. ART industry is now a 25000 crore rupee pot of gold” (GoI 2009:11). An average Indian surrogate makes US\$2000 - \$US7000 for one delivery, and this one-time income can be life changing for her entire family (Mukherjee 2015).For bearing twins, a surrogate receives a higher fee - \$10000, for miscarries within three months, the fee is \$600. The commissioning couple has to pay \$28000 for the successful delivery of the baby (Lucy Wallis 2013).

With the legalization of commercial surrogacy in 2002, India transpired as the world's transnational surrogacy hub. There are approximately more than 3000 fertility clinics in India spread over places like Anand (Gujarat), Bangalore (Karnataka), Mumbai, Delhi, etc., apparently, growing at 20per cent per annum, attributing a cost in between \$35,000 and \$40,000 per surrogacy service (Rudrappa, 2015; also, Bhattacharyya, 2016).

Samad is one of the leading fertility centres in India since 1989 and India's first NABH accredited IVF hospital. It is located in the city of Trivandrum, with its branches at Pattor, Attingal and Kollam. Samad IVF hospital is the first IVF hospital in south Kerala. Indian Society for Assisted Reproduction (ISAR) for good medical practices. It is an ICMR enrolled ART clinic. South Kerala's first test tube baby was delivered at Samad IVF Hospital on September 24, 2000. Another milestone in its journey, that Kerala's oldest mother through ART at the age of 62 years in 2004. In the context of surrogacy, Kerala's first surrogate mother delivered a baby in Samad hospital in the year 2005. The present study tried to bring out an authentic introspection into the surrogacy cases handled in Samad hospital. The details of each case were collected from the hospital authorities through the case files stored in the hospital.

The story of each case is narrated as provided by the authorities and an analysis of which is made below.

Case No.1

NAFSI, aged 25 years, was a surrogate from Ernakulam. She was married for seven years and was widowed at the third year. She has a child from the wedlock. She started donating her eggs at a hospital in Ernakulam as referred by a friend. The commissioning parents brought her to Samad hospital as a surrogate for them in January 2011. In April, she was given counseling. Consent was agreed upon between the commissioning parents and the surrogate mother on two terms.

- 1) Her ovum will be donated.
- 2) She will be acting as the surrogate.

Then the treatment for her started. In July, an ultrasound scanning was taken. It was found that her endometrium was thin. Chance of pregnancy less. Therefore, the treatment for her started. In August, her body was ready for egg donation Treatment was carried out. Regular checkup were done. Delivery was successful without any complications.

Case No. 2

The commissioning parents were Christian settled in US. The husband was aged 47 and wife 41. Both have an educational qualification of pre degree. They were in America for last five years, and then they came back to India. No trace of infertility was detected in their family background. The husband was diabetic. Sexual intercourse was regular between them (3-4 times in a week). All other regular tests were taken. In the month of November, Since, the wife among the commissioning parent is found incompetent to carry , adoption was advised from the doctors side.

In the year of 2007, the commissioning parents went to another hospital. Laparoscopy to clear the fallopian tubes was done there. But they didn't conceive even after this.

In August 2008, the couple came back to Samad hospital to enquire whether there is any option left out other than adoption. The doctor then pointed out that surrogacy is one option left out. They were told to bring out a surrogate. In February 2010, they came back with a surrogate. The clinical psychologist gave fertility counseling to these commissioning parents.

In May 2010, the surrogate mother was diagnosed with thin endometrium. The surrogate then refused to undergo any further treatment and she left the hospital. The doctor further told the commissioning parents to bring another surrogate mother.

In 2011, February, they came back with another Hindu surrogate aged 37 years. Tests were done Counseling was given. IVF was successful. The foetus's growth was found to be normal. Then suddenly, the surrogate along with the commissioning parents has left the hospital at their own account. They might have delivered the baby somewhere else.

Case No. 3

Kavya, aged 23 years was married for three years. Husband was a daily wager and her parents were no more. They have a child in the wedlock. She came to the hospital in December 2013. Counseling was given for her and consent was taken from the surrogate mother and her husband. Her sister stood as the bystander in this case. On February 8, 2015, she wrote an affidavit to the hospital stating she is leaving the hospital at her own risk and account. In this case, the commissioning parents do not come in person to the hospital, as their treatment was not necessary in this case. However, they have given the agreement and consent to the procedures.

Case No. 4

The case was of a Muslim couple from Kollam. They were referred from a hospital there. The female was aged 37 and the male of 47 years. Both were Btech Engineers. They had a surgery from KIIMS and extroscopy (uterus operation) was done three times upto 2011. Then they went for laparoscopy in another hospital in Ernakulam. IVF was taken 6 times and ESCI one time. Hypothyroid was there and there was no drug allergy.

As a last resort, surrogacy was advised. They brought a surrogate from Kazhakkootam who is a Hindu. She came with her husband, who is also hailing out from Kazhakkootam. They have two children. The semen storage of the commissioning parent was there. The treatment was successful. On the second day of delivery, a healthy baby was delivered.

Case No 5

The commissioning couple was Hindu Brahmins. The husband aged 47 and wife 43, hailing from Calicut. The surrogate was from Kollam and aged 26 years. The delivery took place in 2015. There were no other issues. They were happy and have recommended two other patients.

Case No 6

The commissioning parents were from Trivandrum aged 58 and 56. The contract were entered between the commissioning parents and the surrogate on November 2015. The surrogate aged 33 years and her husband aged 38 were from Manacaud Trivandrum. The four were given counseling. In 2016, the deliver took place and no other complications were there.

Case No. 7

The commissioning parents were from Trivandrum. Wife aged 29 and Husband 30. Both were government servants and have an education qualification of masters and above. They came to the hospital in April 2014. The wife was diagnosed with chronic kidney disorder, Nephropathy and was also allergic to dust. They have obtained a certificate from the authorities stating that she should not be conceived. It was their first marriage and have never been pregnant before.

In October 2014, a complete checkup of the lady was done and surrogacy with donor eggs was advised. They were willing to the same. It was told that it take two to 12 months to find a surrogate. They found a surrogate from Fort Kochi aged 23 years who has been married for three years and having a child. Counseling was given to them in the month of June. The treatment started in the month of August. In December, the body of surrogate was found ready for embryo transfer.

The remaining facts remain unknown. Hope there was a revocation between the parties on the agreement.

Case No 8

The commissioning parents were Muslims, aged 39 and 38. The husband has having an education of degree and was doing business. Prior to the treatment, they have taken treatment for three years (2009-2012) from CRAFT. Hysteroscopy was done there. She had an abortion in

November 2011. They came to the hospital in February 2012. They were requested to bring a surrogate, once their case history was analysed. They brought with them a surrogate in the month of June, who was a Muslim from Poonthura (hopefully neighbors). Counseling was given to all the parties. Since their eggs cannot be taken, donor eggs from taken. The treatment started in the month of October. In December 12, 2013, a male healthy baby was born to them. The baby was handed over to them on December 15, 2013.

Case No 9

The commissioning parents aged 40 and 39 were Hindus and were working in Saudi. The wife was a staff nurse over there. They came to Samad in 2005. They had an laparotomy (An open surgery) before seven years. And before four years, ICSI treatment from Edappal was taken. Even after two cycles of the treatment, she was not conceived. In August 2011, they brought a surrogate, who is 34 years and her husband 46 years. They were married for 6 years and have one child. Counseling was given for all in the month of November. In October, consent was taken. Donor egg was taken in this case. The delivery took place in 2013.

Case No. 10

The commissioning parents, Thankaraj and Bindhu ,aged 39 years and 35 years were Hindus from Kollam working in Gulf. The husband was a Btech engineer and wife had an education of BSC. Bindhu was diagnosed with fibroid PCOD. They came to Samad Hospital in 2002. The treatment started in 2009 as they were not regular. They brought a surrogate, Manjusha Shijilal, aged 29 years from Allapppy. A male baby was born to them in 2013.

Case No. 11

The commissioning parents Vyshak aged 27 and SanujaVyshak aged 25 are accountants. They hailed from Kollam. Before coming to Samad, they have taken the

treatment from Amrita hospital Ernakulam. It was a peculiar case where they had not have sexual intercourse after three years of marriage. However, they wanted a biological baby of their own. They were sent to counseling. After 3 sessions of counseling, the counselor advised for surrogacy. They have brought with them a surrogate in 2013. Nevertheless, they did not turn up further to sign the contract.

Case No. 12

The commissioning parents were a Muslim couple aged 50 and 41 years from Kollam. They came in the year 2015. The surrogate mother was a Hindu aged 25 years, her husband aged 30 were daily wagers from Kollam. Everything went well and a healthy baby was delivered through surrogacy.

Age of surrogates

The age group of surrogate mothers and commissioning couple were classified and analysed. As per the upcoming bill, a surrogate mother should be within the range of 25-35 years of age. The criterion for the commissioning couple is that they should be married for five years and was infertile. The age group of the surrogate mothers was examined. It was found that seven out of the 12 surrogate mothers were of 25-35 age group. four among them were found to be the age group of 20-25 and one among them belonged to the category of 35- 45, Whereas the commissioning couple 11 of them were of 35-45 age group. Seven among them of 25-35 group, two were found to be above 35 and one below 25.

It is evident that the age criteria of 25-35 is not followed may be cannot be followed in strict sense. As in India, where child marriages are still common, at the age of 20-25 itself, women are married with at least one child. There are also instances, where mother acted as surrogate for her daughter, so in such conditions, obviously the age of mother will be greater than this 25-35 range. As far as the age of the commissioning couples are considered, they have to be married for 5 years and

infertile to opt for surrogacy. In cases of late marriages, or in cases where infertility is a known fact, this five year long waiting period to be eligible for surrogacy is derogatory to their fundamental rights. The survey and interview has brought into understanding that in cases of surrogacy, what the hospitals look for is whether the surrogate is married and her reproductive status. This age criteria are often disregarded for the purpose of convenience.

Religion of Surrogates and Commissioning Parents

The religion of the surrogate mother and commissioning couple was provided in the hospital records. However, secularism is shouted out in the streets, it is a hidden truth that when it comes to things like marriage and procreation, India is highly caste-ridden society. There were instances, where the couple demanded for surrogate of their caste and has put own different conditions on what to eat and what not to eat in the agreements as part of their religious culture and orientation.

At the time of interview, the hospital authorities have revealed that there are strict implications from the Christian church of certain communities regarding the practicing of surrogacy. There is a strict ban on the same among followers. However, there are patients who approach them in person and prompt them to keep their identity in person due to the pressure from religious denominations. Among the commissioning couple, eight were Muslims and that 12 were Hindus. Among surrogate mothers, nine were Hindus and three were Muslims. No Christian surrogates were found. Most of the surrogates who have undergone surrogacy were Hindus by religion. There were three Muslims and no Christians were there. Among the commissioning couple, most were Hindus, eight were Muslims and two were Christians.

There were hardly any issues based on religion in the surrogacy cases handled in the hospital. As the commissioning couple, themselves find the surrogate, they agree upon their choices before taking them into the hospitals. Since the details

are of confidential nature, many orthodox families were willing to take surrogacy against all religious ties was visible from the records of the hospital.

District of Surrogates and Commissioning Parents

The samples of the case study was surrogates and commissioning couple who sought treatment in Samad Hospital, Trivandrum, which was a pioneer in the field of IVF. Among the 12-surrogacy cases, handled, four surrogates were from Trivandrum, two from Kollam, two from Alappuzha, two from Ernakulam, one from Kasargod and one from Pathanamthitta. The commissioning couple were mostly from Kollam and then from Trivandrum. There were two from Ernakulam and one each from Kozhikode and Thrissur. Most of the surrogates were from Trivandrum. The researcher has come across many personal experiences, where woman belonging to middle class of Trivandrum narrated their stories that they were forced by their abusive husbands to undergo surrogacy for their economic gains. It was shocking to hear from them that since they refused, they were thrown out of the wedlock. This was a clear indication of prevalence of the practice at the root levels and its negative influence. Surrogates were far more available in Ernakulam and are more acquainted with the process of IVF, egg donation etc.

Marital Status of the Surrogate Mother

The marital status of the surrogate was recorded in the hospital records. In India, to be a surrogate, one has to be married with one child of her own. The consent of the husband is sought in cases of surrogacy. Though this is not a mandate, the consent is sought in the agreement and there will be a counseling session with the husband along with the surrogate mother and the commissioning couple.

From the records, it was found that 11 out of 12 surrogates were married and the wedlock sustaining where one is widowed. Most of them were found to be married early and

having children. Most of them faced emergent needs of money as they were striving to make both ends meet.

Number of Children of the Surrogate Mother

Whether surrogate sought was married and having children was recorded in the hospital. The present draft bill on surrogacy mandates the surrogate to be married having one at least one child to be eligible for a surrogate.

Among the 12 surrogates, nine were having one child of their own. Three among them were having two children of their own at the time of having surrogacy for the commissioning couples.

Previous History of Surrogates on ART

The medical history of the surrogates along with their background, family planning, acquaintance with ART procedures will be sought the doctor in the treatment for surrogacy and will be recorded accordingly.

Table 4.8 Previous History on ART Surrogates

History	Frequency
Egg donor	5
Egg donor and surrogate	1
First time	5
Unknown	1
Total	12

Source: Primary Data, 2019

As per the records, five among the 12 surrogates were been acquainted with the process of egg donation. A minimum

of two to three times, eggs were donated. There were five surrogates, who do not have any previous history ART.

This clearly indicates that most of the women are known about the egg donation and other procedures. Thus, they might be known about its benefits and risks in particular. Chances of exploitation in this regard from family or husband is not ignorable, however the authorities pointed out that most of the surrogates were mature and bold enough to talk and enquire into the proceedings of the treatment and were found ready to undergo treatment. Doctors pointed out that Ernakulam has grown out to be a hub in the field of IVF, and there are agencies that recruit women to the process.

Number of Surrogacy Taken by Surrogates

As per the new bill on surrogacy, a woman can be a surrogate thrice in her lifetime. Out of the 12, for 10 surrogates, it was their first time doing surrogacy. And for two surrogates, they have already done one surrogacy beforehand and it was their second time.

Time Taken for One Surrogacy

Critics to surrogacy has argued that it has turn out to be fashion surrogacy or medical tourism where surrogates are used for reproductive capacity for the sake of couples who were unwilling to gestate due to their personal choices. The same is with regard to the surrogates; this is not baby making machine. They have to go through various health, mental and physical risks to fulfill the process.

Table 4.9 Time Taken for Surrogacy

Year in which surrogacy treatment begin	Year in which baby was delivered
2011	2012
2004	2005
2013	Left the hospital at 33 weeks of pregnancy
2013	2014
2014	2015
2015	2016
2014	2015
2012	2013
2012	2013
2011	2013
2009	2013
2008	2009

Source: Primary Data, 2019

In most of the cases, it took 12 months to complete the process of surrogacy after signing the agreement. As this involves many systematic processes, it always took more time than usual. In two cases, it took about two years to complete the process and to deliver the baby. This may be due to different complexities, or inconvenience caused in health, or other issues. At times, the surrogate needs treatment as to make their body fit for embryo transfer.

Age of Commissioning Parents

When the age of commissioned parents were analysed to find the pattern of their age, most of the commissioning parents were of the age of 35 or above. It is after long years of IVF and other ART treatment, they opt for surrogacy. This clearly

identifies that surrogacy was opted as a last resort for fulfilling the wish for a biological child.

Educational Qualification of Commissioning Parents

The educational qualifications of the commissioning couple were recorded in the hospital. Whether the people undergoing surrogacy are educated or not was the area of concern. Most of the Commissioning parents (CPs) were graduates or above. Four among them were having a PDC/plus two qualification. One among them has passed SSLC. This indicates that they were duly qualified to understand the health risks associated with the process.

Medical Condition where Surrogacy is referred to Commissioning Parents

Whether surrogacy was a choice or was it the last resort to fulfill the bliss of parenthood was the fact analysed. The treatment history of the couple were available in the hospital, the table 4.10 was formulated with reference to those records.

Table 4.10 Medical Condition where Surrogacy is Referred to CPs

Medical condition	Frequency
Chronic Kidney Disorder – Nephropathy, Allergenic to dust, Consumption not possible	1
Diabetic	1
Endometriosis in the presence of other factors contributing to infertility	1
Fibroid	1
Hysterectomy	1
ICSI , Not conceived even after two cycles of treatment	1
IVF done prior	1
Laprotomy	1
No issues	9

One D &C, Hysteroscopy done	1
PCOD, BCO	1
Surgery, Laparoscopy , IVF (six Times), ICSI One time, Hypothyroid	1
Tubal disease and Ovarian Disorders	1
Unexplained infertility, Male factor	1
Uterine disorders	1
Wife In competent to carry	1
Total	24

Source: Primary Data, 2019

The commissioning parents were advised for surrogacy after years of IVF treatment being not successful or the wife or the husband having reproductive issues such as endometriosis, tubal disease, or in whom the medical or surgical therapy has failed, endometriosis in the presence of other factors contributing to infertility, immunological factors, cervical factors, male factors, ovarian or uterine disorders or in some cases unexplained infertility. They have undergone various surgeries to cure the problems but have ultimately failed

Time Taken for Treatment for Commissioning Parents

To the many, who claim surrogacy is mere exploitation of surrogates; there is another view of human rights from the perspective of Commissioning parents too. The following table 4.11 details the time taken for treatment for infertility by the commissioning parents is a revelation to the same.

Table 4.11 Time Taken For Treatment for CPs

No of years	Frequency
2	2
3	2
4	4
6	4
7	2
9	2
11	6
12	2
Total	24

Source: Primary Data, 2019

It is to be noted that these commissioning parents have undergone two to 12 years of treatment in the dream of fulfilling the bliss of parenthood. All these years, they have to undergo various painful surgeries and hectic treatments to achieve their dream for a child. The hopes of these parents prompt them to undergo any treatment to their capacity. Surrogacy thus was the final resort of these parents for realizing the dream of a child.

Other Issues and Concerns of Surrogacy

In Samad, they follow the ICMR guidelines and the format of agreement in the ART Bill 2010. There is always hospital lawyer. Before ART draft was in place, the lawyer prepared the contract. There are four contracts;

1. Contract between the ART clinic and the surrogate
2. Contract between the commissioning couple and the surrogate

3. Contract between the commissioning parent, hospital and nominee

And there will be a Malayalam contract between the commissioning couple and surrogate. All the cases on surrogacy handled by the hospital, there is agreement, which is signed by both surrogate and commissioning parents. It was evident that all the surrogates had a copy of the contract with them and they are very clear about each aspect of the surrogacy contract. This point to informed consent of both the parties. During the interview, the chief consultant as follows narrated an incident,

A Christian couple having one girl child sought for surrogacy. The husband's sperm was immobile. They found a surrogate and a donor and an agreement was entered into. A triplet was born to the couple. Later, the husband sought divorce on the ground that the children were not his legitimate ones. As there is an agreement signed into, that can be proved before the court of law.

The researcher has personally seen agreements along with identity cards and photographs of the patient attached to each case file on surrogacy. They pointed out that surrogacy at samad is considered to be that of a last resort when all other options fail and not the first resort. After the stages of medication counseling, investigative process, Operative process fail, then only the option of surrogacy option is preferred. Thus, it is not a one time sitting process. In addition, even after that the parties has to agree on mutual terms, then they come to hospital. The hospital will then check the health background of the surrogate and advice on the risks will be explained upon. Then, only the agreement is signed and the terms will be clearly explained and thus an informed consent is sought.

The authorities told the researcher that accommodation facilities depend upon the patients. No specific facilities other than the treatment facilities are provided by the hospital. They further told that there is community base ban issued in case of surrogacy. They added that the French embassy called and

banned any French citizens from taking surrogacy from their clinic.

Economic Concerns of Surrogacy

As per the authorities, the starting payment for surrogacy is 7-8 lakhs. Out of this four to 5.5, lakhs will alone constitute the treatment cost at the hospital. However, this may vary. As per the authorities, a minimum treatment for surrogacy is from 1.5 to 2.5 lakhs. This varies according to the medical conditions of the patients. Beyond this, there will be insurance cover to be taken to the surrogate mother, accommodation facilities and other routine charges.

As per the details provided by Kinder Hospital Cherthala, the full cost of surrogacy may vary from 10-15 lakhs, which constitutes all these additional expenses. The hospital provided the initial treatment for surrogacy that is up to the stage of embryo transfer or consumption, and then the surrogates will be sending to a hostel carried out by an agency. All the further formalities associated will be carried out by these agencies. They will have their doctors own accord. They provide all the amenities needed for the surrogates. Everything done under their umbrella is strictly confidential and hence they are unable to access. Bourn Hall Clinic, Kochi has advertised in their site that a full package of surrogacy at their clinic will cost about 19, 00,253.48 Indian Rupee.

Thus, from the above, it was clear that surrogacy is a scientifically advanced treatment. It cannot be denied that this process put forward a wide arena of opportunities to those who are deprived of progeny. The rights of the surrogate should be protected and the exploitation should be curbed away. At the same time, there should be clarity with regard to the objectives of laws and regulations in this field. It can provide more transparency in the treatment. The law should always evolve with the needs and necessity of the society is a fact to be admitted.

Conclusion

Commercial surrogacy – Legal Lacunae and Socio Economic Considerations was a huge leap at once, until and unless an understanding with the real facts is brought through the study. Since then it was blind with the speculations surrounding it. When comparing with other countries, India was found to be a country where cost of surrogacy is less. Attractive packages, accuracy and safety of treatment, affordable prices, availability of surrogates, etc. are a few factors contributing to it. The laws on surrogacy in India are inadequate to deal with the practical problems of surrogacy. It is not expected from the legislative to ban the right to choose an individual but to ensure their safety and protection from exploitation once they are into this sort of employment. The single people, live-in couples, those who cannot get married, Trans or queer persons or couples cannot access surrogacy is highly discriminatory. It is not sensible to think that the impact of closing down commercial surrogacy could boost the adoption rates in India.

ART bill and Surrogacy Regulation should be brought into light. The contradicting provisions have to recheck. The vague prohibition of commercial surrogacy has to be looked into. The existing law, which approves only sexual reproduction, deprives the fundamental right of persons who are unable to conceive and procreate using sexual mode of reproduction. The doubts on surrogacy can be cleared only by the implementation of a proper legislation in this regard. Since third party reproduction includes a lot of social stigma associated with it, a legal framework is essential.

What is the role of a state in such crisis? Whether it should be the problem creator or the protector. It is the duty of the state to act, to recognize the challenges, to report it and to prevent it. Going back to the past society is not the answer to be sought. The technological advancement in the twenty first century cannot be discarded. If there is a way out from a particular problem, the way has to properly maintain than to

lock it and ban complete access to it. True that, commercialization and exploitation in medical treatment should be discouraged and prohibited; while charity and altruism are highly appreciated and accepted. However, consideration, compensation and reimbursement are to be recognized and paid. No medical treatment guarantees complete cure and without complications. Surrogacy is one among them. Restricting it can limit women's options. The surrogates can put the money earned through this to good use. More than any sort of judgment in this regard, it is better to accept to understand and appreciate the advancement in this field. Law and ethics is an evolving entity. It should follow the science and societal needs. Prohibition on vague moral grounds without a proper assessment of social ends and purposes which surrogacy can serve would be irrational.

Regarding the ethical and economic concerns of surrogacy, the social taboos associated with surrogacy is larger in a patriarchic country like India. Once, caste was a taboo, color was, like ways now many of the technological advancement were viewed with an aversion without proper knowledge of it. Ethics of a profession and a procedure are different with different persons. A uniform guideline on the ethical concerns is difficult, still curbing the menace of exploitation should be of foremost importance in this regard. The economic gains of surrogacy are one promising factor of attracting many into this arrangement. In a scientifically advanced society, making use of the economic benefit cannot be disregarded rather can be regulated. Thus, Altruistic surrogacy is not an answer to end the exploitation in the field of commercial surrogacy. More attention is needed in the regulatory provisions of ART hospitals and the process should be made more transparent to public. Thus to conclude, commercial surrogacy can open a wonderful way for individuals to help hopeful parents deprived of progeny, if the legal and ethical complications associated with it can be sorted out.

Suggestions

1. The provisions of law with regard to surrogacy have to be precise and transparent.
2. The regulation of the 3,000 clinics in the country dealing with surrogacy is only possible with stringent laws being enacted for the regulation of surrogacy.
3. The prime object of any law on surrogacy should be curbing the menace of exploitation of surrogate mothers and not to end up in exploiting them more.
4. ART Bill along with Surrogacy Regulation Bill should be brought in par with legislations on surrogacy.
5. The government should make surrogacy process more transparent by establishing government-regulated clinics on surrogacy.
6. There should be proper accounts on the surrogacy cases and it should be strictly scrutinized by regulatory bodies.

In the present context, third party reproduction has been an area of attention. Recent news has been reported on concerns on alarming issues related to egg donation and abuse of women in Kerala. The area of third party reproduction is a wide area which needs in depth study and immediate attention to resolve the conflicting issues. There is larger scope of further research in this area surrounding technological advancement as well moral, social and ethical issues on one's privacy and dignity.

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Impact and Implications of Institutional Interventions among Tribes in Kerala

P. K. Sujathan

The alternative economics originates from the inherent handicap associated with the extant and established economic theories. Neo-classical economists accorded precedence to determination of output by market forces whereas the new institutional framework prescribes alternatives for the ill-conceived strategies and formulae charted out by the present institutions for beckoning tribes to the mainstream. The term 'tribe' is probably derived from the Roman word 'Tribua' which means a political unit and was applied to refer to a social group defined by the territory they are occupied. As the name implies tribals are 'Adivasis' or original dwellers living in the subcontinent from unrecorded time and possibly driven into the forest by more aggressive settlers. Pre-independence tribals living in forests, hills and even the plain area isolated from the mainstream. They are most physically distinguishable with darker skin and stout built physique. They often live in houses made of thatched roof, mud, bamboo and brick houses set in swampy valleys and plateaus. Tribal population is the aboriginal inhabitants of India who have been living a life based on the natural environment and have cultural patterns congenial to their physical and social environment. The concerted efforts for the development of these groups by the Central and State Governments have had only marginal impacts on their socio-economic conditions in spite of the various welfare measures and constitutional protection.

It is an indubitable fact that inclusive growth is a buzzword echoing in the development corridors of the state. Inclusiveness beckons sustainable development of tribal community at large by bringing them from the outlier strata to the mainstream. It is because the very yardstick of development has drastically changed from material advancement to human development which guarantees enlarging human choices, achieving life expectancy, literacy and per capita income sans skewness. However, a cursory look unravels that the extant schemes, policies, programmes and initiatives aiming at ameliorating the lot of tribes have become a chimaera. In this backdrop, the role of an alternative framework occupies a critical and strategic position in the development literature.

A process of tribal empowerment was initiated in India through the 73rd Constitutional Amendment in 1993. The reasons for this amendment were the largely ineffective Panchayati Raj System in the country and the need for adapting to the tribal system of local self-governance. Tribal development and empowerment activities are carried out in India by both the government and the NGO's. The government gives constitutional guarantees to the tribals and the NGO's also joins hand with the secular civil society groups and work for the upliftment of the tribals. The accelerated tribal development efforts and empowerment programmes were started in Kerala in 1974-75 with the introduction of Tribal sub-plan strategy in India. Till this period tribal welfare programmes were carried by government departments without a specific fund and programmes. Under the sub-plan strategy, separate funds were allotted for implementing the specific development by the Central and State governments. It gave a new phase to tribal development activities. ITDPs were also introduced in tribal regions to coordinate the programmes. Later in 1995, the Panchayati Raj System offered some opportunities to tribal participation and involvement in decision making through *OoruKootams*. This opportunity of participation helped to improve the way of lives of the tribal people.

Statement of the Problem

The state of Kerala has several features that distinguish it from the rest of India. The achievement of Kerala in the field of education, health, habitat, land reforms etc, generally constitutes what is widely known as 'Kerala Model of Development'. Still, it is regrettable to note that the tribal communities in Kerala have been largely left out of the gains of the Kerala model of development (Nithya 2014). Among the outliers, the tribal communities are the most vulnerable groups. All developmental experiences which played an important role in shaping the political economy of Kerala seem to have fully eluded the tribal communities. The distinct 'Kerala model' is, therefore, not proved to be 'inclusive'. In the shift from traditional society to modern orientation, tribes remained a neglected child and the contact between tribes and non-tribes increased.

The institutional arrangements were not in tune with their tradition and culture. Institutionalism ensured quality in the development process and there is little room for market forces. However, even after the interventionist strategies of the Government in the form of institutions, programmes, policies and schemes, the tribal economy is wrestled with a lot of socio-economic issues. such as emergence of second-generation diseases such as Alzheimer's disease, undesired change in food habit and the resultant lifestyle ailments, unscientific cultivation, loss of traditional healing capacity, alienation of land, dwindling folk tradition, loss of sustainable food security measure, foeticide, proliferating role in criminalism and more importantly destruction of traditional mode of division of labour and birth of a new socio-ethnic group as 'wage earner'. Their customary rights over natural resources such as forests, cultural identity and traditional knowledge including intellectual property rights, cultural heritage and traditional wisdom were destroyed. As a result, Attappady now accommodates near 80% of tribals living in abject poverty. Loss of traditional food items such as *ragi*, *chama*, *cholan*, *veraku*, *thina*,

thuvava, honey, tubers, roots and medicinal vegetables are also gripping Attappady. Baring this, the failure of public distribution system, poor performance of Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) and lack of essential drug supplies. Thirty-year-old Madhu of Attappady's Kurumba tribal community was beaten to death by a mob for stealing food provisions from a store is a vivid manifestation of the skeletons of starvations in the region. Though pregnant women and children below the age of six are getting nutritious meal a day under the community kitchen programme, there was no effective mechanism to address the issue of anaemia among school-going tribal children.

Despite initiatives to supply nutritious meals through community kitchens, 672 tribal children in the region are suffering from malnutrition. Of this, 370 children had been found acutely malnourished, needing urgent attention. Millions have been expended for addressing the issue of malnutrition. There is massive displacement of tribal groups by the more affluent settlers who migrated into the region. The influx of settlers into Attappady started the process of social exclusion of the tribal groups, who in spite of being the original claimants to the lands in the region became dependent on the land belonging to the settlers. Raju (2011) after having analyzed the district-wise details of ST population concluded that Wayanad district accommodates a tribal population of 136062, highest among all districts. The tribal population is increasing from 1981 onwards, though their growth rate tapered off from 22.75 percent in 1991 to 13.47 percent in 2001. Only 1.06 percent of the families were provided with lands which is about 2.2 percent of the identified land. The settlers exploited the forests, deforesting Attappady beyond recognition and snatched away the forest-based livelihoods of the tribal groups, the original inhabitants. Jaswantha (1998) in his study held that the loot made by landlords against tribes caused legislation to support the tribes which paved the way for a struggle between tribes and non tribes. However, the struggle against tribes and the

oppression of the landlords received support from the state administration.

Attappady has long suffered from such short-sighted extraction by its inhabitants. This has continued as experts and policymakers argue about massive state failure and the design of large development projects funded for the block. Although the relationship between tribes and states has been the focal point of some of the studies, there is no adequate theory that correlates tribes to political development or a theory that could be used to explain the superiority of tribal identity over other formal and informal organizations. In this context, one seminal study is by Lisa Anderson (1990) that analyses various factors that contributed to the formation of the modern Libyan state including the role of tribes. This article specially uses a historical perspective to explain the continuity of the tribal role in Libya and the times of its rise and decline. The failures of government interventions in Attappady are such that they ran between eco-restoration and social interventions. For instance, women's groups were encouraged to stand up against the illicit liquor business in the villages. However, settlers who owned the local breweries usually employed tribal men as wage labourers. Biswajith et al. (2011) analysed the nature and dimension of change in the lives and status of tribal women in Tripura. The study based on secondary data found that rural tribal women were marginalized in the growing modern economy of the state. The economic and socio-cultural system provides a certain dualism in the life pattern of men and women among the tribal in general and urban and rural tribal women in particular. At the end of the day's work, these labourers are paid partly in kind (liquor) and partly in cash. Thus organised tribal women's groups that agitated against rampant alcoholism among tribal men created significant friction within the tribal community. Secondly, government interventions in Attappady did not succeed in ensuring that the benefits were spread equitably. The welfare initiatives of government have not percolated to these indigenous groups. Thus, this study

pointed out pro-tribal initiatives with the aid of community members (Kakkoth (2005) Rao et al. (2006) studied about the issue of displacement among tribes in Andhra Pradesh. The analysis shows that the interventionist strategies of the state governments regarding the rehabilitation of Scheduled Tribes are ineffective and perfunctory. The study made a strong case about livelihood diversification among Scheduled tribes. In most parts of India, the scheduled castes and scheduled tribes continue to be victims of social inequality and economic deprivation (GoK, 2009). This again underlines the emphasis and need for a well-defined domain of public service delivery system. The fact that the development of tribals can be achieved only through “the appropriate policies and programmes” concerning alleviation of poverty and environmental degradation is disproved so far as Attappady is concerned as the plight of the tribes continue to worsen even after institutional interventions. Tribal communities have, over the decades, witnessed the fragmentation of their habitats and homelands and disruption of their cultures through predatory tourism (Kannabiran 2015). Sujata (1998) in her magnificent study held that studies on tribal development should consider health as the primary remit. Nowhere a study on the impact of institutional interventions on tribes has been conducted.

From the above discussion, it is evident that two main causes for the fall in Human Development Index in tribal areas are the weakening of institutions meant for delivery of goods and services to tribal population and secondly inherent and predatory channelization of welfare funds. A scrutiny revealed that the problems hovering around tribes are about education, unemployment, health and the like. Even though institutions have to play a strategic role in bringing tribes back on track, their performance is very weakened and limited. So, an alternative perspective should be chalked out in assuaging the conditions of tribes. In this backdrop, the role of the government as a vibrant institution is imperatively important to provide a lasting solution to the aforesaid issues among

tribes. The present study attempts to investigate the socio-economic issues among tribes in the Attappady tribal block of Palakkad district of Kerala state in a new institutional framework with an alternative paradigm.

Research Questions

Based on the aforesaid problem under investigation, the following research questions are propped up.

- (a) Why is it that the government initiatives, in general, did not consider whether the primitive tribal society could afford and absorb heavily funded projects within a short period?
- (b) Was there any inherent handicap associated with the functioning of institutions?
- (c) Why is it that the socio-economic conditions of heterogeneous tribes remained uncared, unsolved and unattended notwithstanding the public interventions and institutional mechanisms?
- (d) Is there a pressing need for an alternative model for alleviating the socio-economic issues of tribes in Attappady?

Objectives

1. To study the factors influencing Human Development Indices among tribes in Attappady block.
2. To assess the institutional capabilities to improve Human Development Indices among tribes.
3. To predict an alternative framework for bringing back tribal people to their land for sustainable development.

Data Source and Methodology

Primary data were collected through a sample survey conducted in three panchayaths viz. Agali, Puthur and Sholayur. Multi-stage stratified random sampling method was

adopted for the study. Both primary and secondary data were made use of for the study. Secondary data were obtained from reports of Integrated Tribal Development Programme (ITDP) and Census reports and Reports of Kerala Institute for Research Training and Development Studies of Scheduled Caste and Scheduled Tribes (KIRTADS) and evaluation study of State Planning Board, Government of Kerala. Structured interview and Focussed Group Discussion were carried out for the study. A field survey was also conducted for assessing the factors influencing Human Development Indices from a sample consisting of tribal beneficiaries, tribal officials, experts, activists, SHGs and NGOs'. Five-point Likert scale was applied to elicit information from tribes. For fructifying the second objective, the prevailing institutional mechanisms (as we have centrally sponsored, state-sponsored and LSGD sponsored schemes) to improve the lot of the tribes was dissected to arrive at a critical gap between what has been desired and achieved. Based on the results obtained from the second objective, an alternative model or framework for improving the conditions of the tribes by restoring their land was made.

In the present study, three stages have been envisaged such as selection of Panchayaths, selection of communities and fixation of sample size for the Panchayaths and communities. In the first stage, panchayaths have been identified and selected for the study. In Attappady block, there are three panchayathsviz. Agali, Puthur and Sholayur respectively. The tribal communities, as a whole, who are heterogeneous, are not equally distributed in the above said three panchayaths. In other words, tribal community spread is not uniform in all panchayaths. So, we are bound to select all three panchayaths which, in one way, or the other represent the tribal communities differently. In the second stage, from among the selected panchayaths, tribal communities should be selected. There are mainly three tribal communities available in Attappady viz. Irular, Kurumbar and Mudugar. Who of these communities may be selected from the aforesaid panchayaths? In Sholayur, since

only Irula community is inhabited, we have taken Irular from Sholayur panchayat (3487 households). Similarly, no Kurumbar community is seen in Agali and Sholayur, but only in Pudur Panchayaths. So, we have taken Kurumbar community from Pudur Panchayaths (490 households). As regards Agali panchayaths, the largest numbers of Mudugar community are available (739 households). So, Mudugar communities are taken from Agali. The third stage pertains to fixation of sample size for different panchayaths and communities. To determine sample size, MaCorr sampling technique is used. As per this formula, the sample size for the confidence level of 95% and a confidence interval of 5% is used. Thus,

$$\text{Sample size} = \frac{Z^2 * p * (1 - p)}{C^2}$$

$Z = 1.96$ for 95 % Confidence Level.

Socio-Economic Status of Scheduled Tribes - Kerala Scenario

The socio-economic conditions of scheduled tribe population of the state of Kerala are explained in brief. Firstly, the total tribal population in Kerala is 484839 which constitute 1.45 percentage of the total population of Kerala State (Table 1,1). Secondly, the percentage of population as per the 2011 Census was 1.14 and thus there has been an increase of 0.31 percentage in the proportion during 2001-2011. The highest percentage of tribal population has been recorded in Wayanad District (18.55 percentage) and the lowest in Thrissur District (0.30 percentage). Thirdly, Tribal Population in absolute numbers has increased by 1,20,650 and the highest number of Tribes are residing in Wayanad District (1,51,443) and the lowest in Alappuzha District (6,574). Finally, as far as the sex composition of Scheduled Tribe population is concerned, 238203 males (213208 in rural areas and 24995 in urban areas) and 2, 46, 636 females (219884 in rural areas and 26752 in urban areas) are residing in Kerala. The Sex ratio of Scheduled

Tribe population in Kerala is estimated at 1035 (MSME-Development Institute, Ministry of MSME, Government of India, 2015). In Kerala, major tribal communities are Paniya, Kattunayakans, Kurichchya, Uralies, Kuruma, etc. of Wayanad, Mudugas, Irulas and Kurumbas of Attappady, Malayarayan, Muthuvans, and Uralies of Kottayam and Idukki and Kanikkar of Thiruvananthapuram. Five major tribal communities are notified as primitive Tribes taking into account stages of their transition into modern society. They are Koragas of Kasaragod, Kattunayakan of Wayanad, Kurumbar of Attappady in Palakkad district, Cholanaikans of Nilambur Valley in Malapuram district, and Kadars of Cochin (Suresh, 2015).

Table 5.1: District Wise Distribution of Scheduled Tribe Population of Kerala in 2011

Districts	Total	Per cent of ST to Total Population	Male	Female	Rural	Urban
Thiruvananthapuram	26759	0.81	12624	14135	20022	6737
Kollam	10761	0.41	5195	5566	7663	2875
Pathanamthitta	8108	0.68	3947	4161	2961	445
Alappuzha	6574	0.31	3175	3399	19698	3613
Kottayam	21972	1.11	10974	10998	19698	2274
Ernakulum	16559	0.50	8349	8210	8324	8235
Idukki	55815	5.04	27995	27820	55243	572
Thrissur	9430	0.30	4362	5068	5859	3571
Palakkad	48972	1.74	24314	24658	47023	1949
Malappuram	22990	0.56	11272	11718	18247	4743
Kozhikode	15228	0.49	7429	7799	9555	5673
Waynad	151443	18.55	74476	76967	148215	3228
Kannur	41371	1.64	20141	21230	36302	5069
Kasaragod	48857	3.74	23950	24907	46094	2763
KERALA	484839	1.45	238203	246636	433092	51747

Source: Compiled from Census Data, 2011

Table 5.2: District Wise Number of Scheduled Tribe Families in Kerala

SL. No	Districts	percent of families	No of families
1	Thiruvananthapuram	4.80	5183
2	Kollam	1.21	1303
3	Pathanamthitta	1.66	1791
4	Alappuzha	0.81	872
5	Kottayam	4.03	4353
6	Idukki	13.26	14315
7	Ernakulum	2.20	2370
8	Thrissur	1.37	1481
9	Palakkad	12.25	13223
10	Malappuram	3.39	3656
11	Kozhikode	2.48	2680
12	Waynad	33.47	36135
13	Kannur	8.34	9005
14	Kasaragod	10.74	11598
Total			107965

Source: Scheduled Tribes Development Department, Government of Kerala, November 2013

Table 5.2 shows that the total Scheduled Tribe families in Kerala are 107965 which are living in all the Districts of the State. Waynad District contributes 33.47 percent, that is, 36135 Scheduled Tribe families which is followed by 13.26 percent, that is, 14,315 families in Idukki, 12.25 percent, that is, 13,223 families in Palakkad and 10.74 percent, that is, 11598 families in Kasaragod. Table 1.2 also reveals that around 78 percent Scheduled Tribe families in Kerala State are located in five major districts, namely; Waynad, Palakkad, Idukki, Kasaragod and Kannur. On the other hand, only 872 Tribal households are residing in Alappuzha District and that constitutes only 0.80 percent of the total tribal families in Kerala.

Habitation of Scheduled Tribes in Kerala

Most of the Scheduled Tribal communities of the State are residing in the Western Ghats which is in near to the forest eco-system. One of the main characteristics attracted to Scheduled Tribal communities is that their habitations have strong ethnic boundary based on kinship. Two types of Tribal residential groups were found in Kerala, settlements or hamlets and forest camps. Forest land had been allotted to Scheduled Tribes by the Department of Forest in which semi-permanent habitations have been constructed. They generally like to settle on the slopes or terraces of hillsides which is near a perennial stream/river. The number of families in a hamlet varies from 20 to 100 households. In every hamlet, there is a recognized leader known as 'Moopan' who deals with the socio-religious aspects of the members. The Mudugar and Kurumbar Tribal communities of Attappady layout their settlements in two parallel straight rows facing each other and the houses in a line share sidewalls. The space between two lines is used for socio-cultural activities. The line houses in the hamlets are around a hollow square which is a common ground. The basic characteristics of traditional hamlets have undergone dramatic changes. The modern houses having the features of settlers houses of different designs are found in the hamlets and electricity, colonies, roads, and other modern facilities have changed their traditional pattern of the hamlets.

Access to Educational Institutions

Lack of proper access to educational institutions is one of the main reasons for the educational backwardness of Tribes in the State. The details of access to educational institutions in Kerala State are given in Table 5.3

Table 5.3: Access to Educational Institutions

Educational Institutions	Within Hamlet	0-.5 Km	.5-1 Km	1-2.5 Km	2.5-5 Km	Above 5 Km	Not Specified
Anganwadies	1236	356	938	1686	244	117	185
Single Teacher institute/ M. G. L. C	224	72	70	280	322	903	2891
Continuing Education center	155	69	112	629	609	1330	1858
Lower primary School	68	220	432	2046	1318	576	111
Upper Primary School	26	137	240	1519	1442	1301	97
High School	4	76	120	906	1394	2197	65
Higher Secondary School	2	53	88	668	1123	2762	66
Vocational higher Secondary School	4	24	35	232	383	3745	339

Source: Scheduled Tribes Development Department, Government of Kerala, November 2013

For 117 hamlets in the state, anganwadies are more than 5 Km away from hamlets and only 1236 hamlets have Anganwadies within the hamlet. The surprising fact is that 903 hamlets have Single Teacher Schools which are 5 Km away from the hamlets. For 576 hamlets, L.P Schools, for 1301 hamlets, U. P Schools, for 2197 hamlets, High Schools and for 2762 hamlets, Higher Secondary Schools are located at a distance of more than 5 km away from hamlets. Only for 2530 hamlets, Anganwadies, only for 366 hamlets, Single Teacher Schools, only for 711 hamlets, L.P Schools, only for 403 hamlets, U.P Schools, only for 200 hamlets, High Schools and only for 143 hamlets, Higher Secondary Schools are situated within the distance of one kilometer.

Access to Health Institutions

Inaccessibility to health institutions is another crucial cause for the severe health problems of Scheduled Tribes in Kerala. The information of hamlets situated above 5 Km away from the nearest health institutions is given in Table 5.4.

Table 5.4: Access of Tribals to Hospitals

Sl. No	Health Institutions	No. of hamlets above 5 Km away from Health Institutions
1	Primary Health Centre	2139
2	Community Health Centre	3150
3	District Hospital	4604
4	Ayurvedic Dispensary/Hospital	3238
5	Homeo Dispensary/Hospital	3242

Source: Scheduled Tribes Development Department, Government of Kerala, November 2013

Table 5.4 reveals that 3150 hamlets are 5 kilometers away from the nearest community health centers and 2139 hamlets are 5 kilometers away from the nearest Primary health centers.

Education of Scheduled Tribes in Kerala

The literacy rate of Scheduled Tribes is lower compared to other categories of the State and this is one among the main reasons for the socio- economic backwardness of the Tribal community. The District wise details of literacy rate of Tribes in Kerala are shown in Table 5.5.

Table 5.5: Details of Literacy among Scheduled Tribes in Kerala

Districts	Population (above 5 Years)	Illiterates	Percentage	Literates (Including neo literates)	Literacy Rate
Thiruvananthapuram	15712	1589	1.62	14123	89.89
Kollam	4120	747	0.76	3373	81.87
Pathanamthitta	5792	666	0.68	5126	88.50
Alappuzha	2793	375	0.38	2418	86.57
Kottayam	15519	883	0.90	14636	94.31
Idukki	48616	8410	8.55	40206	82.70
Ernakulum	7999	1585	1.61	6414	80.19
Thrissur	4984	1601	1.63	3383	67.88
Palakkad	41881	17743	18.03	24138	57.63
Malappuram	12561	4207	4.28	8354	66.51
Kozhikode	9633	1695	1.72	7938	82.40
Waynad	137374	39349	39.99	98025	71.36
Kannur	34265	7791	7.92	26474	77.26
Kasargod	43729	11745	11.94	31984	73.14
Total	384978	98386	100	286592	74.44

*Source: Scheduled Tribes Development Department,
Government of Kerala, November 2013*

Table 5.5 shows the literacy rate of Tribes in Kerala State and is estimated as 74.44 percent, which is lower than the State average and almost equal to the national average literacy of 93.91 percent and 74.04 respectively (2011). In Kottayam District, the tribal literacy rate is highest which stands as 94.31 percent and which is higher than the State average followed by Thiruvananthapuram District, 89.89 percent and Pathanamthitta District 88.50percent. The literacy rate of Tribes in Palakkad District is registered as 57.63percent which is the lowest among all other Districts in the State.

Health Status of Scheduled Tribes in Kerala

Health care is a serious issue among tribes in Kerala especially among the isolated tribal areas. High poverty levels, lack of food security, poor supply of nutrition, illiteracy, poor sanitation, lack of safe drinking water, unhealthy life style, beliefs and cultural practices, changes in food habits etc. aggravate the poor health status of tribes. In olden days Tribes ate leaves in forest, roots, fruits, tubers and was sufficient to maintain the food requirement and nutritional status. The primitive and indigenous health care system followed by the tribal communities helped to protect the health status of them.

Access to Health Care Institutions

The main reason for the same is due to lack of proper access to health care institutions. The same is evident from Table 5.6.

Table 5.6: Access to Health Care Institutions

Sl. No	Districts	Number of Settlements			
		Total	Without Health Care institutions	Services of Health Care Workers Not Available	Immunization, Cleaning etc. not Arranged, Health Camps not Organized
1	Thiruvananthapuram	226	90	36	55
2	Kollam	26	8	3	7
3	Pathanamthitta	43	27	9	18
4	Alappuzha	34	30	20	21
5	Kottayam	101	59	20	24
6	Idukki	299	156	71	106
7	Ernakulum	61	29	16	29
8	Thrissur	59	15	12	20
9	Palakkad	426	245	105	162
10	Malappuram	229	106	51	72
11	Kozhikode	126	84	44	64
12	Waynad	2167	749	235	462
13	Kannur	353	177	60	93
14	Kasargod	612	328	98	173
Total		4762	2103	780	1306

Source: *Scheduled Tribes Development Department, Government of Kerala, November 2013*

Out of 4762 hamlets, 2103 tribal hamlets have no health care institutions within their premises. In 780 hamlets health care workers are not available. The situation is very worst in Palakkad, Wayanad, Idukki and Kasaragod Districts. In 1306 hamlets immunization, medical camps, cleaning etc. are not conducted.

The Problem of Malnutrition among Tribes in Kerala

The increasing infant mortality rate and death rates are mainly due to malnutrition. The malnutrition affected Tribal families are very high in Kerala and the District wise details of malnutrition are given in Table 5.7.

Table 5.7: Malnutrition among Tribes in Kerala

Sl. No	Districts	Total Families	Malnutrition Affected Families	Percentage to Total Families
1	Thiruvananthapuram	5183	231	4.46
2	Kollam	1303	49	3.76
3	Pathanamthitta	1791	387	21.61
4	Alappuzha	872	170	19.50
5	Kottayam	4353	114	2.62
6	Idukki	14515	2002	13.99
7	Ernakulum	2370	79	3.33
8	Thrissur	1481	146	9.86
9	Palakkad	13223	2204	16.67
10	Malappuram	3656	742	20.30
11	Kozhikode	2680	414	15.45
12	Waynad	36135	5773	15.98
13	Kannur	9005	994	11.04
14	Kasaragod	11598	829	7.15
Total		107965	14134	13.09

Source: Scheduled Tribes Development Department, Government of Kerala, November 2013

Among 107965 Tribal families, 14134 families, that is, 13.09 percent are apparently affected by the problem of malnutrition. The largest numbers of malnutrition affected families are found in Wayanad District, Idukki District and Palakkad District. But proportion of malnutrition affected

families are concerned, it is highest in Pathanamthitta District, Alappuzha District and Malappuram District. The percentage of malnutrition affected families is the highest in Pathanamthitta District. On the other hand, only 2.62 families are affected by malnutrition in Kottayam District.

Profile of the Study Area -Attappady

Attappady is the biggest and one and only Tribal block in Kerala having an area of 745.59 square kilometers bespattered throughout three Panchayaths namely Agali, Sholayur and Pudur. Major parts of this area are dotted with dense forests infested with wild animals. Eastern part of Attappady is affected with huge deforestation and become a rain shadow region. This is mainly due to the cultivation pattern followed by the migrant farmers. Tribes in Attappady are very backward among the underprivileged groups in Kerala and India. There are 192 tribal hamlets in Attappady (ITDP Attappady 2011), populated by three tribal groups namely Irulas (82.3percent of the total tribal population), Mudugars (9.6percent) and Kurumbas (4.6percent) and among them, Kurumbas are the most primitive group residing in the remote areas of Attappady, whereas Irulas are numerically dominant and mainly residing in the eastern part of Attappady. Literacy rate of Attappadi is 49.55percent, in sharp contrast to the rest of Kerala and India. It is quite surprising that 83 percent of the tribal population lives below poverty line. The major Tribal communities in Attappady, Irulas, Kurumbas and Mudugars are belonging to the broad category of Dravidians. Among them, Kurumbas are less exposed and have been affected less compared to other groups from the onslaught of settlers into Attappady. All the tribal communities residing in Attappady are enrolled as Scheduled Tribes. The Scheduled tribal economy was traditional one because it was marked by incessant dependence on agriculture activities, minimum surplus allocation of resources and general reciprocity within the group.

Land mainly forests are the critical source of natural resources and have divergent uses such as shifting of cultivation including nomadic farming to sedentary agriculture.

Attappady Tribal Block is a part of the Nilgiri Biosphere Reserve in the southern part of India having a complex topography and is isolated from all other high range hills of India. The terrain of Attappady block is really undulating, which includes a large number of different types of hillocks of different shapes which are ranging from 450 to 2300 meters height from the sea level. A major part of the land area in Attappady is within the category of lands above 35 degree slope. In Attappady block, the rainfall differs considerably in different areas, in the western slopes it is higher, an annual average rainfall of about 3000 mm whereas it is less than 1000 mm in eastern Attappady. The rainwater on the surface of the earth has high run off speed mainly due to deforestation, barren hills and low depth of soil, further leading to deforestation. The soil erosion in Attappady is an apprehensive issue in Kerala State. The Attappady region is blessed with two major rivers, namely, Bhavani and Siruvani. These two rivers are capable to provide adequate water for drinking and irrigation in the major part of Attappady.

The relationship between tribes with land and forest in this region underwent a serious change in the course of time. Attappady is one of the main forest areas in the Kerala state, including an area of 765 square kilometers including in Palakkad district which is a part of the old Malabar region which formed as a part of the erstwhile Madras Presidency under British India. Kurumbas, Irular and Mudugar accommodated themselves in this region up to the beginning of the second half of the 20th century.

The absentee landlords mainly known as the 'Jenmis' cornered the privileges and rights on land in Malabar before the arrival of the British and its cultivators were ruled by customs and conventions. The 'Jenmis' in general were tasked with

cultivation in the land to the local chieftains who were leasing out their land to tenants, being the actual tillers of the soil. Fortunately the inhospitable forest areas of Attappady were left detached by the chieftains and their tenants. Consequently, the tribes in Attappady were enthralled by unbridled freedom and they made use of the forest lands as per their own primitive mode of cultivation, acquisition of hill products and hunting. But changes began slowly with the annexation of Malabar region towards the end of the 18th century by the Madras presidency of British India. The class and position of 'Jenmis' went through a strategic change when they were awarded the legal ownership rights over and above their lands by the British in the place of their erstwhile 'jenmom' rights found in conventions and customs.

These three tribes originally trained themselves in changing cultivation in Attappady. While Mudugars and Irulas are now practicing settled agriculture, Kurumbas still continue the shifting cultivation and remain as food gatherers. In earlier days they used the freedom to cut and burn large areas of forest land for facilitating their shifting cultivation. But currently situation changed and hence they have to take adequate permissions from various offices mainly from the Department of Forest who apportions those pieces of cultivable land irrespective of their preference. The Forest Department distributes land known as 'kothukadu' to the Ooru Moopan, the head and he who allots the plots of each Tribal household residing in the hamlet. He is helped by Treasurer known as Bhandari, Junior Headman known as Kuruthala and a soil man who is an expert in agriculture known as Mannukkaran. The Mannukkaran's role is mainly based on rituals and customs. But soon after the emergence of settled farmers from various parts of Kerala and Tamil Nadu, they changed their agriculture habit and shifted themselves to settled agriculture. Hitherto Attappady remained as a typical tribal economy which was a self-sustaining, self-contained and self-replacing system, cut off from the mainstreams of formation of Kerala society.

The Scheduled Tribes had their own unique economy, society and their own mode of production, exchange and distribution that were organized and managed by premeditated laws maintained by their customs and kinship relations which was based on their social set up. Since it is based on forest economy, the productive economic activities are mainly hinged on over utilization and exploration of natural resources including forest by means of food gathering, hunting, shifting cultivation, and fishing. Even though, the main foundation of their economy was cultivation, no relevance to the question, who owned the land so far.

Land was not at all an uncommon property among tribes and hence each family cultivated the allotted part of land by the chief among tribes based on the family size. Thus, ownership right on land was enjoyed by the tribal community and an individual tribe enjoys only the operational rights. Till the beginning of 20th century, the existence in the form of the tribal economy of Attappady continued as a closed economy. But later it broadened the relationship with traders and merchants in this area including Tamil people and Gowndans` who in the initial stage came to collect various forest products including honey, herbal plants, horns and herbs from tribes. At the same time a few sections of the tribes like Mudugars and Irulas even started products even for the purpose of trade produced by them including mats, baskets and ropes.

Attappady is one of the east sloping sub-plateaus in Kerala state nestling below the south-western corner of the Nilgiri bio-sphere segment of Western Ghats. The Coimbatore district plains are along with eastern flank and Mannarkkad - Palakkad plains are to its west and south. Administratively Attappady is the part of Palakkad District and belongs to Mannarkkad Taluk. Attappady is subdivided into six revenue villages namely, Agali, Padavayal, Kottathara, Pudur, Kallamala and Sholayur. It has three Panchayaths namely Agali, Pudur and Sholayur, all falling within the Attappady Community Development Block. Attappady block has a long

inter-State border, its north side is the Nilgiri District, a part of Udagamandalam Taluk and to its eastern side is the Coimbatore District, Mettupalayam, Coimbatore North and South Taluks. The Nilambur Taluk of the Malappuram District is along the northwest corner of Attappady beyond the Silent Valley National Park. The Mannarkkad Taluk headquarters is 37 Km west of Agali Panchayath and Coimbatore city is 45 Km to the east. The geographical area of Attappady extends over approximately 750 sq. Km. It is the part of the Western Ghats which is falling within Kerala. Attappady is located fully within the catchment area of Bhavani River and her tributaries, Kodungarapallam and Siruvani. A significant part of watershed line extent of the Western Ghats passes through Attappady. The watershed lines passing through Attappady is specifically relevant for the Cauvery Basin which has inter-State implications. It is also equally important for Bharathapuzha Basin which is now a water deficit area in Kerala. There is a Goat Farm in Kottathara village owned by Government of Kerala where the 'Attappadi Block' breed is obtainable.

The 249 Kilometer square Attappady Reserve Forest is an important buffer zone which is a part of the Silent Valley National Park. The 81 Kilometer square of this forest area was cut off to become most of the new 94 Kilometer square Bhavani Range which is the part of 147.22 Kilometer square Silent Valley Buffer Zone, assented by the Kerala State Cabinet on 6th June 2007. The Kerala Cabinet sanctioned 35 staffs to protect the Buffer Zone area and sanctioned two new forest stations in Bhavani range at Thudukki and Anavai. This particular zone is mainly tasked with checking the unlawful cultivation of 'ganja', poaching and illicit brewing in the areas near to Silent Valley National Park and preservation of the Buffer Zone protected area.

Population of Tribes in Attappady

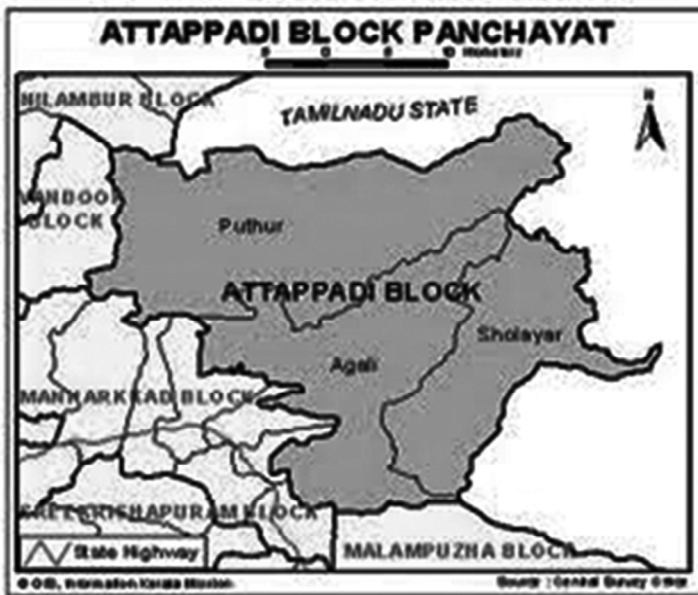
The total tribal population in Attappady is 32646 and they are residing in 10530 families. Among the total population,

14131 are males and 14776 are females and hence the sex ratio is 1045, favorable to female (Survey Report, ITDP Attappady, 2016). The Panchayath wise population details of Scheduled Tribes in Attappady is represented in Annexure 2.

Occupation of Tribes in Attappady

As of now, agriculture farming is the single largest source of employment for tribes in Attappady, employing around 94 percent of the tribes of which cultivators and agricultural laborers constitute around 51 percent and 43 percent respectively. Collection of forest products is another minor source of employment and engaging 1 percent of tribal population. Around 0.2 percent of the tribal population is accommodated by the private and public sectors. Reservation of employment in 25 different government services has provided only a few job opportunities to the tribes.

Figure 5.1 Map of Attappady Tribal block



The first objective was related to identifying the factors influencing the HDI of tribes. Accordingly, based on Kerala Human Development Report prepared for Govt of Kerala by Centre for Development Studies in 2005, four prominent factors influencing HDI of tribes were found to be education, health, income and housing conditionstoo. It is because housing conditions have a strong bearing on HDI of tribes. The second objective was to assess the institutional capabilities to improve Human Development Indices among tribes. The secondary data is triangulated with the help of Focused Group Discussion from the officers of seven institutions. Based on Focused Group Discussion, service delivery mechanisms of ten institutions have been assessed in terms of HDI of tribes viz AHADS, KIRTADS, Project Officer, ITDP, Forest Department, GoK, Mahila Samakya, Attappady Co-operative Farming Society, Kurumba society, Vattulaki Girijan Society, Kudumbasree and Integrated Rural Technology Centre.

Table 5.8 Inter Institutional Disparity of Service Delivery to Tribes

	Education	Health	Income	Housing	Overall Satisfaction Level
AHADS	A1=40	B1=30	C1=75	D1=88	58
KIRTADS	A2= 0	B2=45	C2=0	D2=0	45
PO, ITDP	A3=85	B3=100	C3=55	D3=65	79
DEPT OF FOREST, GOK	A4=60	B4=0	C4=70	D4=0	65
MAHILA SAMAKYA	A5=60	B5=60	C5=0	D5=0	60
ACFS	A6=85	B6=50	C6=90	D6=55	70
KURUMBA SOCIETY	A7=0	B7=0	C7=80	D7=0	80
VATTULAKI GIRIJAN SOCIETY	A8=0	B8=0	C8=30	D8=0	30
KUDUMBASREE	A9=60	B9=70	C9=70	D9=55	64
IRTC	A10=60	B10=0	C10=0	D10=60	60

It is discernible that Kurumba society is ranked atop in providing service delivery to tribes by scoring 80. It means that 80 is the highest average mark awarded to Kurumba society by the respondents followed by Project Officer, ITDP and Attappadi Co-operative Farming Society.

Socio-Economic Conditions of Tribes in Attappady

The following tables explain the socio-economic conditions associated with tribes in the study area viz. Puthur, Agali and Sholayur panchayaths.

Table 5.9 Demographic Profile of Tribal Households in Attappady

Variable	Category	Frequency	Percent
Tribal Categories	Irular	159	85.48
	Mudugar	18	9.67
	Kurumbar	9	4.83
Total		186	100
Sex	Male	91	48.92
	Female	95	51.07
Total		186	100
Age	10-20	1	.53
	20-30	55	29.56
	30-40	87	46.77
	40-50	23	12.36
	50-60	9	4.83
	60-70	4	2.15
	Above 70	7	3.76
Total		186	100

Source: Primary data 2019

Table 5.9 shows that the demographic profile of the sample respondents. The sample consisted of 186 tribal people. Out of this total number, almost 86 percent belongs to Irular

community followed by Mudugar (10 percent) and Kurumbar (5 percent). This is mainly because of the population of Irular community is higher in Attappady than other tribal groups. In terms of gender, the percentage of female respondents (51.07 percent) were higher than Males (48.92 percent). Out of this total number, nearly 47 percent of them were between the age group of 30-40years, nearly 30 percent between 20-30 years, 12.36 percent were between the age group of 40-50 years and only 0.53 percent between 10-20 years. It is observed that majority (47 percent) of the respondents are belong to middle age group.

Table 5.10: Educational Status of Tribes in Attappady

Educational status	Number	%
Illiterate	106	56.75
LP	40	21.5
UP	18	9.75
High School	9	5
SSLC	11	5.75
HSE	1	0.75
Technical	1	0.5

Source: Primary data 2019

Table 5.10 provides data on educational attainment of household population listed in the survey. Around 56.75 percent of respondents in the study area are illiterate and 21.5 percent of respondents have completed LP followed by UP (9.75 percent). Only 5 percent of respondents have studied high school and degree respectively. The above table clearly shows that the illiterate people are higher than the literate people.

Table 5.11: Occupational Status of Households in Attappady

Variable	Category	Frequency	Percent
Common Occupation	Cooli	127	68.50
	Agri /Farming	26	14.00
	Business	1	.25
	Self-Employment	7	3.75
	Govt. Job	14	7.50
	Unemployed	11	6.00
Total		186	100
Animal rearing	Yes	82	44.25
	No	104	55.75
Total		186	100
Employment Connected to Forest	Collection of Products	3	1.75
	Forest Watcher	4	2.00
	Forest Manual Work	4	2.00
	Nil	175	94.25
Total		186	100

Source:- Primary data 2019

Table 5.11 shows occupational status of respondents in the study area. Out of 186 respondents 68 percent of respondents were engaged in daily labours followed by 14percent of respondents were engaged in agriculture, 8 percent of respondents were engaged in government job, 3 percent of respondents were self-employed and 0.25 percent engaged in business. There are 6 percent of respondents remains as unemployed. In the case of animal rearing majority of the respondents opine that they are not engaged in the animal rearing. In terms of Employment connected to forest 94.25 per cent of respondents are not engaged in these types of works.

It is evident from Table 5.12 that the mean income of the respondents as a whole is Rs.1339, Maximum income per month is Rs.4417 and minimum is Rs.581 per month.

Table 5.12 Income, Expenditure and Savings of Households

Variable	Minimum	Maximum	Mean
Income	581	4417	1339
Food Expenditure	400	5500	821
Medical expenditure	500	1250	295
Monthly savings	0	4500	155

Source: - Primary data 2019

In terms of food expenditure the maximum food expenditure is Rs.5500 and minimum is 400. Regarding medical expenditure maximum medical expenditure is Rs.1250 and minimum is Rs.500. In the case of monthly savings, minimum monthly saving is 0 and maximum is 4500. The average monthly saving is Rs.155.

Table 5.13 reveals that the monthly income of the respondents from all their sources. Majority of the respondents (39 percent) earned below Rs.1000 per month. About 29 percent of respondents have no income, they are unemployed, 53 respondents (28 percent) were earning Rs.1000-5000 and only 7 respondents (4 percent) were earning Rs.5000-15000 per month. There is no respondents with the income above Rs.15000. It is observed from the analysis that the majority of the respondents (39 percent) were getting very low level income.

Table 5.13: Monthly Income

Monthly income	Number	Percent
Nil	54	29
Below Rs 1000	72	39
Between Rs 1000 and Rs 5000	53	28
Between Rs 5000 and Rs 15000	7	4
Above Rs 15000	0	0
Total	186	100

Source:- Primary data 2019

Table 5.14 reveals the details on educational institutions. As per the table preference of students for educational institution is higher for nearest Government schools/colleges. The main reason for preferring such institution was easy accessibility. Majority (68.27 per cent) preferred institution located outside the Attappady. Free Mid-Day Meals, Uniform, Books are the major facilities provided by the institution.

Table 5.14: Educational Institutions attended by the Tribals

Variable	Category	Frequency	Percent
Type of Institution Preferred	Nearest Govt School/College	109	58.60
	Nearest Private/Aided School/College	44	23.65
	Govt and Aided	21	11.29
	Model Residential Schools	12	6.45
Total		186	100
Location of Institution Preferred	Within Attappady	59	31.72
	Outside Attappady	127	68.27
Total		186	100

Facilities Provided by the Institution	Transportation	3	1.61
	Hostel Facilities	43	23. 11
	Free Mid-Day Meals, Uniform, Books	140	75. 26
Total		186	100
Reasons to Prefer the Institution	Easy Accessibility	85	45. 69
	Good Facilities	5	2. 68
	Better Standards	1	0.53
	Free Transportation	21	11.29
	Opinion of others	32	17.20
	Hostel Facilities	42	22. 58
Total		186	100

Source: - Primary data 2019

Table 5.16 gives information about the medium of instruction of the students. Almost 99 percent of respondents come under the Malayalam medium than English medium (1.07 percent).

Table 5.15: Medium of Instruction

Medium of instruction	Number	%
English	2	1.07
Malayalam	184	98.92
Tribal specific	0	0
<i>Total</i>	<i>186</i>	<i>100</i>

Source: - Primary data 2019

Table 5.17 clearly indicates that the opinion of respondents regarding the year of schooling a child should attend. About 88.70 percent of respondents say that there is a need for a child to attend 8-12 years. This clearly highlights the awareness of respondents for getting better education.

Table 5.16: Opinion on School Enrolment

Attending the school by the student	Number	%
1-5 years	9	4. 83
5-8 years	12	6.45
8-12 years	165	88.70
Total	186	100

Source: - Primary data 2019

Table 5.18 shows that accessibility of health institution among tribes. About 6 per cent of respondents avail the services of health institution by more than 1 km. away from their home and 5 percent of respondents avail the services of hospitals or clinics within 1 km. far away from their residents in and only 1 percent avail the services within 500 mts. A good percentage (88.17 percent) has no access to health institution. This data clearly highlights the poor accessibility of health institution among tribes.

Table 5.17: Access to Health Institution

Access to health institution	Number	%
Nil	164	88.17
Within 500 mts	2	1
Within 1 km	9	4. 83
Beyond 1 km	11	5. 91
Total	186	100

Source:- Primary data 2019

Table 5.20 reveals that the enrolment of medical insurance. Out of 186 surveyed respondents only 11 were having medical insurance, but 175 respondents were not having the medical insurance.

Table 1.18: Enrolment of Medical Insurance

Medical insurance	Number	%
Yes	11	6
No	175	94
Total	186	100

Source:- Primary data 2019

Table 5.19: Land Possession

Land possession	Number	%
Up to 5 cents	94	50.53
Between 5 cent to 10 cent	57	31
Between 10 centto 20 cent	19	10
Between 20 cent to 50 cent	12	6.45
Between 50 cent to1 acre	4	2.15
Beyond 1 acre	0	0
Total	186	100

Source:- Primary data 2019

Table 5.19 shows that half of the tribes are having possession of marginal lands. Nobody has land beyond 1 acre. Hardly 2 percent have land between 50 cent to 1 acre.

**Table 5.20: Distribution of Basic Amenities
(Housing/Cooking/Water) Among Tribes**

Variable	Category	Frequency	Percent
Toilets	Own Toilet	114	61.29
	Common Toilet	1	0.53
	Open Defecation	71	38.17
Total		186	100
Details of Open Defecation	Within Their Own Land	0.46	. 65
	Banks of Streams	42	59. 22
	Banks of River	3	4. 60
	Other Public Places	25	35. 21
Total		71	100
Washing and Bathing Facilities	Within the House	67	36.00
	Within the Premises	19	10.25
	Near Public Tap	4. 18	2. 25
	Near Public Well	1.4	. 75
	Pond	2. 32	1.25
	Streams	20.46	11.00
	River	72	38.50
Total		186	100

Source:- Primary data 2019

Table 5.20 gives information about the basic amenities in the tribal households. As per the above table majority, that is, 61.29 percent of tribal households in the study area have some type of toilet facility in their home. Moreover, 38 percent have no toilet facility at all. That means they are opting for open defecation.

Regarding the details of open defecation more than half of the respondents in the study area use banks of streams. About 38 percent of respondents use river for washing and bathing facilities.

Table 1.20: Type of Land

Type of land	Number	%
Cultivated	29	16
Uncultivated	157	84
Total	186	100

Source:- Primary data 2019

Table 5.20 shows the percentage of land ownership according to cultivated and uncultivated land. Overall, a large proportion of households (84 percent) have no cultivated land whereas remaining 16 percent have cultivable land. This jeopardizes the livelihood security of tribes.

Table 5.21: Problems Related To Drinking Water

Variable	Category	Frequency	Percent
Tribes with Drinking Water Problems	Yes	149	80
	No	37	20
Total		186	100
Problems Related to Drinking	Low Quality	74	39.75
	High Distance	14	7.50
	Un availability	46.5	25.00

Water	Lack of Collection Facilities	7.9	4.25
	Lack of Storage facilities	2.79	1.50
	Long Queues	3	2.00
	Unhygienic Collection Place	0.46	.25
Total		186	100

Source: - Primary data 2019

Table No.5.21 shows the problems related to drinking water. It is found that overall 80 percent of the households face drinking water problems where as 20 percent do not. The main problem regarding drinking water is low quality (39. 75 percent) followed by unavailability (25 percent).

Table 5.22: Repayment of Loans: Defaults and Reasons

Variable	Category	Frequency	Percent
in Loan Repayment	Yes	15	8
	No	7	3.75
	NA	164	88.25
	TOTAL	186	100
Reasons for Default	Agriculture Failure	4	2.3
	High Interest	7	3.5
	Alcoholism	0.46	.3
	Unproductive use of Loans	5	1.3
	Unemployment	2.32	.8
	NA	171	92
Total		186	100

Source: - Primary data 2019

Table No.5.22 shows the percentage distribution of respondents who are facing default in loan payment and reasons

for it. Nearly 88.25 percent of respondents have reported that they are free from loan (Debt). Of all reasons, high interest rate and agriculture failure are the major reasons for them to make default in their loan payment.

Table 5.23: Health problems/Disease among Tribes

Variable	Category	Frequency	Percent
Health Problems/Diseases	Tribes Having Health Problems/Diseases	136	73.00
	Tribes without Health Problems/Diseases	50	27.00
Total		186	100
Different Diseases/Health Problems	Anaemia	41	19.18
	Hepatitis A	13	5.82
	Hepatitis B	0.08	3.77
	kidney related	30	14.04
	Liver related	29	13.67
	Stomach related	23	10.62
	Cancer	3	2.06
	Frequent fever	3	1.72
	Sick cell Anaemia	2	1.72
	Heart related	3	2.06
	Sugar	18	13.02
	Hyper tension(BP)	15	11.31
	Brain related	1.39	.11
Total		186	100
Water Based Diseases	Fever	27	19.5
	Cough	31	22.8
	Cholera	8	5.8
	Jaundice	20	10.8
	Nil	56	41.2
Total		136	100

Source: - Primary data 2019

Table No.5.23 clearly indicates that the percentage of tribes having health problems/ diseases is higher (73 percent) than tribes without having health problems (27 percent). Notably 41.2 percent are free from the water based diseases. This is mainly because of the availability of hygienic water supply in the study area.

Table 5.24:Malnutrition and Reasons for Malnutrition among Tribes

Variable	Category	Frequency	Percent
Malnutrition	Tribes with Malnutrition	136	73. 00
	Tribes without Malnutrition	50	27.00
Total		186	100
Reasons for Malnutrition	Changes in food habit	65	47.95
	Changes in life style	50	36.99
	Hereditary Factors	0.63	. 34
	Lack of food/ poverty	27	14. 72
Total			100

Source: - Primary data 2019

Table No. 5.24gives information about the malnutrition and the major reason for this. From the table it is clear that 73% of the respondents are suffering from the problem of malnutrition and the major reason for this intractable problem is changes in food habit. It is found that the malnutrition among tribes is very high, which is mainly due to changes in food habit.

Table 5.25: Problems Related to Community Kitchen and Health Centres

Variable	Category	Frequency	Percent
Problems Related to Community Kitchen	Not functioning	100	54.00
	Not functioning every day	3	1.75
	Not supplying all food items	70	37.75
	Not supplying quality food items	13	6.50
Total		186	100
Problems Connected to Health Centres	Less working hours	8	4.50
	Lack of Doctors	29	15.00
	Lack of Infrastructure	64	34.00
	Lack of ambulance	85	46.50
Total		186	100

Source: - Primary data 2019

Table No.5.25 shows the percentage of respondents who are facing the problem related to community kitchen and health centres. Major problem regarding the community kitchen is that it is not functioning and the problem regarding Health centres is lack of ambulance.

Major Findings

This study mainly aimed at analyzing the impact and implications of the interventions of institutions on the socio-economic lives and livelihoods of tribes in Attappady. The study came across a lot of findings. First of all, there is no mutual correlation on the service delivery exercised in three panchayats by different institutions. Kurumba society ranked atop in providing service delivery to tribes with compared to

other institutions followed by PO, ITDP and ACFS. However, the ANOVA test proved that there is no significant difference regarding the satisfaction level of three tribal communities, viz, Agali, Puthur and Sholaur out of the service delivery of Kurumba society. The highest percentage of respondents in the study area belong to the age group of 30-40. Around 56.75 percentage of respondents in the study area are illiterate. It is found that, the illiterate people are higher than the literate people. Occupational status shows that majority of the respondents are daily labours. Income of the households of the study population shows that the average monthly income per household is Rs.1339. A significant number of household's main source of income is day labour. It is observed from the analysis that the majority of the respondents (39 percent) were getting very low-level income. Regarding access to health institution, inaccessibility is highly visible among tribes as the majority of all tribes do not have access to health institution. A little more than half (50.50 percent) of the respondent 's landholding is very low level. The proportion of uncultivated (84 percent) land is higher than cultivated (16 percent). A significant number of household's main problem regarding drinking water is low quality and unavailability. Only 14 percent of households in the study area have electricity whereas this is absent in remaining households. It is found that overall 73 percent of the respondents face malnutrition problems whereas 27 per cent do not. Among all the respondents, percentage of tribes with health problem is higher (73 per cent). The major health problem among tribes is Anemia.

Alternatives

The followings alternatives are put up for improving the Human Development Indices of tribes and mitigating their socio-economic issues.

- As far as possible, tribal language should be incorporated in the curriculum prepared for tribes. KIRTADS, being a research institute, can do a fulcrum role in this regard.

KIRTADS should conduct studies, publish papers and put up before the government their recommendations for execution.

- At least one *anganwady* in one hamlet, one school in a cluster of hamlets and at least one government college in each Panchayaths can be expeditiously implemented. Formation of *Moopan Council* to ensure compulsory schooling. Moopan stands head and shoulders in every hamlet. No stone in the hamlet is left unturned without the knowledge of Moopan. If a council is constituted to send children to school, the menace of dropouts can be minimised.
- Let names of tribes are retained as such in the admission register at schools. Abandoning traditional names of tribes by teachers from far-flung places that are alien to tribal culture and tradition created a set of aridity and inferiority among tribes such that there is a precipitous decline in their enrolment. Such a practice to be done away with.
- Propagation of sex education and systematic karate practice is the most practical solution to escape from sexual exploitation.
- Primitive food habit (Chama, rabbi, thina) to be reinstated in the food habit of tribes. Community During the survey, it was discerned that tribes of Anwai, Thudukki did not have nutritional deficiency. It was mainly because these are the interior pockets where tribes still have access to their traditional food. Their indigenous medicinal substances kept them agile and alive for a long time.
- As far as possible, three meals a day should be ensured to tribes so that the problem of nutritional deficiency is resolved. As of now, tribes are habituated to two meals a day.
- At least one PHC in one hamlet, one CHC in a cluster of hamlets and Speciality Hospitals in each panchayaths be

constituted and that patent and trademark to be awarded to their traditional healing capability.

- Interior hamlets like Anawai, Thudukki are still bereft of connectivity. So 24*7 uninterrupted ambulance services to these inner hamlets to be ensured. The services of Asha workers should be ensured hassle-free and effective.
- To tribes, only flowing water has life only. So, instead of digging bore wells or open wells for tribes, arrangements to be done for the restoration of pond and river without letting them go defunct (Bavani and Shiruvani rivers). This, in turn, will also help resolve the menace of open defecation whose problem is that water resource in the area is contaminated especially during monsoons paving the way for health problems.
- Tribes, as far as possible, maybe given pure and potable toddy which has been a part of their traditional food.
- Tribal Speciality Hospital, Kottathara to be upgraded to that of Medical College with state- of- the- art facilities.
- Tribes to be accorded free access to forest for the procurement of NTFP and ensure fair price to collected products. One of the biggest handicaps is that very few tribes are engaged in the collection of products from the forest and they are poorly paid for it. This has to be dispensed with.
- Minimum of one-acre cultivable land to be given to each tribal family for augmenting their income invariably. Apart from this, they should be given hands-on training in tandem with KrishiVinchan Kendra and Regional Agricultural Research Station.
- It is high time to implement One Family- One Government Servant Scheme among tribes. This will incentivise the tribes to be better educated and create a genre of competitive co-operation among them to have a firm grip in the job market.
- Animal rearing is a traditional occupation among tribes. This should be heavily subsidised to be more

- remunerative among tribes. Tribes are traditionally tied to this culture.
- No Direct Benefit Transfer be applied in the case of tribes as far as possible. This is likely to goad them to make use of money for nefarious and unproductive purposes.
 - As tribes do not have sufficient wherewithal in the form of working capital, they are forced to lease land to others especially the settlers who woo them at a throwaway rate and corner much advantage out of it.
 - Construction of Eco-friendly houses to be initiated at the earliest because they are tribal friendly too. AHADS is a role model in this regard (even though AHADS is non-existent now) because its execution was based on 'family size' and not the typical 'unit cost' formulae.
 - The houses for the tribes exclusively to be built near the farming place itself. Mud houses to be encouraged because it is most preferred by tribes. The Life Mission of the Government can do a lot in this regard.

Scope for Further Research

The extant study dissected the effect of interventionist strategies of various institutions for ameliorating the lot of tribes at Attappady. A fact checkup reveals that the problems of tribes are as divergent as their categories. What is preferred to by one tribal community, say, for instance, Mudugar is at odds with another category, say, Iruar or Kurumbar. Thus, a meticulous and comprehensive study hairsplitting the heterogeneous behavioural preferences of tribes are seldom researched so far. While the problems of tribes at large are endemic, they need a durable solution. Hence the divergent behavioural preferences of tribes should be disaggregated and decomposed. The existing service delivery mechanisms are bereft of it. We have come across serious inter-institutional disparity on their service delivery to tribes. Hence, time is ripe to avoid a - one-size-fits-all approach without properly studying

the culture, history and health parameters of tribal population. Therefore, a study anchoring around the service delivery mechanisms tailored to the uncommon traits of tribes is an area for further research. This underscores the desirability of undertaking yet another study on tribes.

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6

Civil Society and Social Capital: Case Study on JCI

Tanita Eloo Philip

Group life is inevitable for man as he is by disposition a social being. Whatever be his degree of potential, he needs some kind of an associational life which accredits him to consider and function in an upper level perspective (Stolle and Rochon 1998). It has been persuaded that people obtain their uniqueness and identity only in state of group life (Turner et al., 1985). Further, it provides ample capabilities of group life such as comforts of social life, gains of civilized life and feasibility of socio-economic advancement.

Groups and associations are generally viewed as a source for the creation of social capital (Narayan 1999). People's participation is a source of social capital for civil society (Harris et al., 2008). Social capital is one of the most influential and accepted metaphors in the current social science research. It is a set of norms, relationships and institutions that shape the quality and quantity of a society's social interactions (Grootaert, 1999). Large and wide network of trust and co-operative relationships are evident in societies rich in social capital (Burt (2000)). It generally refers to the community relations that affect personal interactions. It explains how some people gain more success in a particular setting through their superior connections in a society.

The concept of social capital offers a path to bridge sociological and economic perspectives and to provide richer and better explanations of economic development. The nature

and extent of the interactions between communities and institutions hold the key to an understanding of the scenario for development in a given society. The byproducts of social capital like informal relations and trust hold mass of a society together to execute action (Putnam, 1995). This is so vital for the successful working of governmental and non-governmental organization because it opens favorable chance for participation and gives voice to those who are blocked from formal avenues to affect changes. Such groups build the foundation of civil society, the worth of it lies with the intensity and density of relationship among groups and also the correlation between state and civil society (Evans 1997, Renshaw 1994).

Civil society consists of groups and organizations, both formal and informal, which act independently at the state and market to promote diverse interests in society. Coleman notes that physical and human capital are private goods managed and maintained for private benefits, hence there is a direct connection to investments and incentives to invest. Whereas, social structures propagate norms and sanctions that create the environment for social capital, is rarely the person who creates this environment which exclusively reaps the benefits and this is what Coleman asserts as the public goods aspect of social capital. Social capital is frequently a byproduct of others actions such as a few individuals working to create a safe neighborhood or improve a school system.

The major source of social capital for civil society is the maximum participation of people. People who are active in regional level organizations which are even non-political, tends to create great interest in public matters. This interest, coupled with interpersonal social capital between government officials and other citizens, renders the government with more accountability. Therefore, social capital is an integral part of civil society at the micro and macro levels. The organizations like NGOs, sports clubs, associations, common meeting forums play significant role in creating civil society. In this workan attempt is made to examine the presence of social capital

characteristics in voluntary associations. Here, JCI (Junior Chamber International), a voluntary association is selected to examine the role of social capital in creating civil society.

Statement of the Problem

Social scientists take great interest in developing measures of social capital under different forms (level of trust, extent of inter-personal commitments, density of social networks, number of tertiary associations, social homogeneity, political participation) and at various levels (the community, the village, the region, the state). The reason why some countries are successful in managing their economies and establish democratic government than others is still a persistent puzzle. The problem is not with the amount of sheer resources injected into a country, but the presence of favorable conditions for resources to be allocated effectively to attain priority goals. Commitment of government towards development, the transparency and efficiency of bureaucracy are the significant factors in this respect. Never these two conditions emerge in a social vacuum. The role of civil society, citizen awareness of their own rights and responsibilities and the features of social organization must also be taken into account.

Social capital facilitates the exchange of resources and skills across sectors. Through such exchanges, civil society can serve as the beneficiary (via philanthropy, tax exemptions and management training) as well as the benefactor (offering political support, policy recommendations and service provision) even when the state is weak in satisfying the needs of a civil society. Policy-makers are attracted by social capital. It costs nothing and promises the world, writes Christopher Scanlon. Social capital reintroduces a moral dimension into policy thinking. There is a limit to what government could achieve in society. Therefore, this study focuses to examine the presence of social capital characteristics in voluntary organizations and how it plays the role of civil society. Here,

JCI is taken as a case to analyze the influence of social capital in voluntary associations so as to build a civil society.

Objectives

1. To understand the presence of social capital characteristics in JCI
2. To study how JCI plays the role of civil society.

Methodology

This study is primarily exploratory in nature, based on survey and direct personal interviews by using structured questionnaires (Social Capital Integrated Questionnaire). The tools developed by World Bank for measuring social capital are used for the analysis. Social Capital Assessment Tool (SOCAT), and Social Capital Integrated Questionnaire (SC-IQ). SOCAT is an integrated quantitative /qualitative tool used in survey. It measures the constraints and opportunities of individuals and groups by considering the social assets and networks that shows their level of resources. (SC-IQ) is a part of SOCAT, which measures to extract quantitative data based on different dimensions of social capital. Groups and networks, trust and solidarity, collective action and cooperation, information and communication, Social cohesion, inclusion, finally empowerment and political action are the six key dimensions identified as appropriate proxies for social capital. These dimensions are used in this study to measure the presence of characteristics of social capital in JCI.

This study is based on JCI (Junior Chamber International), to analyze the role of social capital in civil society. JCI is an international voluntary training organization where young men and women come together in friendly spirits, train themselves and become better citizen by active participation in various projects, meetings, learning programs and events. There are 23 JCI Zones in India and among these, 3 Zones are in Kerala. Among the 3 Zones in Kerala, Zone XXII is one of the biggest zone of JCI in India and most active in Kerala

comprising of five districts from southern part of Kerala namely Kottayam, Pathanamthitta, Kollam, Alappuzha, and Thiruvananthapuram. JCI Chengannur is one of the active LOM (Local Organization Member) under zone XXII. JCI in Chengannur is selected as a case to study the role of social capital in creating civil society. The population of this study is the members of JCI Chengannur. There are 43 members in JCI Chengannur. Among 43 members, 11 members are working abroad and the remaining 32 members are selected for the study and therefore it is the population survey among JCI members.

The level of presence of these dimensions would be different in different civil society organizations which intended to create social capital. Hence, the study examines the dimensions which are sound and those which plays important role in creating civil society. JCI is taken as a case to study the magnitude of social capital characteristics and the role it plays in creating civil society. Secondary sources of data are collected from the reports and official publications of JCI. Personal interview and interview schedule are used to collect primary data from members of JCI Chengannur.

Scope of the Study

The economy is not just an instrument to be engineered, assembled and altered at a technical level without addressing to its social context. The quality of relationship and network connection guarantees the sustainability of a social unit. This relationship has the power to solve problems of local communities and to connect local community with government agencies, business and community groups. Many people join associations and clubs in order to pool resources and receive the benefits of additional assets. Such clubs and groups have the potential to shower their fruits or benefits directly and indirectly to the local communities. So this draws the need for understanding the benefits that the members and non-members enjoy. Thereby it exhibits how it influences the civic participation and government activities. There's a scope to

analyze the level of social capital at higher levels of society and its spillover effects. This study deals with the nature of social capital formation in Kerala among the members of voluntary associations like clubs.

Section 1: Evolution of Social Capital

The term “social capital” has a long intellectual history in social sciences, but the sense in which the term is used today dates back to 1916 to the writings of Lyda J Hanifan, defines the concept of social capital as: “those tangible substances that count for most in the daily lives of people; namely goodwill, fellowship, sympathy, social intercourse among the individuals and the families who make up a social unit.... if an individual comes into contact with his neighbors. These are the accumulation of social capital, which may immediately satisfy his social needs and which may bear a social potentiality sufficient to the substantial improvement of living conditions in whole community.

After Hanifan’s writings, the idea of social capital disappeared from the social science literature for several decades and in 1950s, it was conceived by a Canadian urban sociologist Loosely in 1956 and in 1960s by the exchange theories (Hommans, 1961), by the urban scholar (Jacobs, 1961) and in 1970s by economist Glean Loury (1977). But the irony of the concept was that none of these scholars had cited the previous researchers on the subject. They used the same umbrella to recapitulate the vitality and implication of social capital to community ties. Loury was critical of neo-classical economics theory, which depicted the narrow individualistic and atomistic understanding of the human capital.

An analogously developed theory of social capital has emerged from the writings of French Sociologist Pierre Bourdieu, (Bourdieu’s 1986), the use of this term is an explicit attempt to understand the production of classes and class divisions. He defined “Social capital is the sum of the resources, actual or virtual, that accrue to an individual or a group by

virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition (Bourdieu, in Bourdieu & Wacquant, 1992). Capital for him is both economic and a set of power relations that constitute a variety of realms and social interactions normally thought of as non-economic.

During late 1980s and early 1990s the eminent American sociologist James Coleman (1926–95) has brought social capital into the mainstream of American social sciences. Although his approach was indeed rather different, he collaborated with Bourdieu for co-editing a book on ‘Social Theory in a Changing Society’ in 1991. Coleman also linked social capital with economics, but in a different way. He sought to combine the insights of sociology and economic theory, seeing social capital as a way of making sense of the overly rational and individualistic models of traditional economics. Coleman’s approach leads to a broader view of social capital, where it is not seen only as a stock held by powerful elites, but notes its value for all kinds of communities, including the powerless and marginalized.

Coleman (1990) who defines social capital: social organization constitutes social capital, facilitating the achievements of goals that could not be achieved in its absence or could be achieved only at a higher cost. Thus, social capital for Coleman is normative and morally natural. It is neither desirable nor undesirable, but simply allows actions to take place by providing the needed resources. Coleman’s works brought social capital into use in the social sciences. The principle source of the idea for community development practitioners and researcher like Robert Putnam stated as... “Social capital refers to features of social organization, such as trust, norms, and networks that can improve the efficiency of social”. With this work, social capital is thoroughly redefined and becomes extremely influential in the development studies internationally. Putnam emphasizes on specific informal forms of social organization such as trust, norms and networks.

Fukuyama (1997) further limited the social capital to certain shared norms and values. He says, “Social capital can be defined simply as the existence of a set of informal rules or norms shared among members of a group that permits cooperation among them. The sharing of values and norms does not in itself produce social capital, because the values may be the wrong ones... The norms that produce social capital...must substantively include virtues like truth-telling, meetings of obligations, and reciprocity”.

Coleman’s (1988) definition, by its lack of clarity, left the door open for a variety of sources of social capital and human uses, that vagueness to seize on trust based voluntary associations. One of the several examples Coleman offers to his understanding of them states as the constituents of civil society as the key source of social capital for communities, regions etc. Putnam argues that “social capital refers to the norms and networks of civil society that lubricate co-operative action among both citizens and their institutions” (1998). Social capital and civil society, therefore, become conflated and the two are almost synonymous. This transition has dramatic implications for the political and theoretical understanding of social capital.

Section 2: Social Capital in Kerala

Kerala has succeeded in reducing poverty by following the path of high investment on human resource development, implementation of land reform measures, introduction of social security measures and organization of the marginalized groups, empowerment of local bodies and of the existence of social capital. Kudumbashree in Kerala has contributed in enhancing the social capital of the poor, which in return has served as a basis for the economic development (John, 2002).

Serra (2001) studied 16 Indian states in a comparative perspective and found that Kerala scored high on most counts making it the state having the highest stocks of social capital in the country. In a recent study of Kerala, Veron (2001) says

“grassroots environmental action tends to meet favorable conditions in Kerala because of its richness in social capital”. Hence there’s a scope to analyze the social capital level at higher levels of society. This study deals with nature of social capital formation in Kerala among the members of voluntary associations like clubs.

The extensive participation of masses in the political life has been a prominent feature in India since independence and contrasts with more limited participation in many new states of Africa and Asia (Weiner 1989). Studies reveal that Political participation is high in Kerala, West Bengal, and the southern states of Tamil Nadu, Andhra Pradesh, Karnataka and the three northern states of Haryana, Himachal and Punjab. Major factors that lead to greater participation in these states are literacy proportions and voluntary associations. Literacy rates acknowledged of these states are higher than the average literacy ratio. Voluntary associations are another resource and with their dynamic liveliness in India are found to be quite extraordinary in many respects.

Voluntary agencies can play a useful role in training people in methods of co-operation and organized work, but also in enhancing democratic participation in society at large by empowering individuals and raising their social understanding. However, data on their numbers, memberships and activities of voluntary associations are neither available nor comparable at state level. The number of NGOS is increasing worldwide. The term voluntary organizations have been used interchangeably with voluntary associations or agencies or action groups or non-governmental organizations (NGOs). UN calls voluntary associations as NGOs. However, the influence and importance of NGOs differ depending on the national context in which they operate.

The study of the Commonwealth Foundations reveals that NGOs increase “Social Capital” by providing people with opportunities to build trust in each other and the capacity to

work together toward common goals. In recent years the presence and number of NGOs has grown in Kerala. The fact which drive people to be a member of any associations or clubs is to build networks and to generate additional resources through networking. So this draws the need for understanding the benefits that the members enjoy, which thereby exhibits how it influences the civic participation and government activities. This study is based on the working of JCI (Junior Chamber International) in order to understand the role of voluntary associations in social capital formation.

Section 3: Junior Chamber International (JCI)

JCI is a worldwide voluntary organization for young leaders and entrepreneurs with more than 300,000 active JCI members. It is training organization where young men and women come together in friendly spirits, train themselves and become better citizen by active participation in various projects, meetings, learning programs and events. Throughout the world JCI functions in more than 6,000 communities located in more than 125 countries.

Indian Jaycees working for the past 57 years as the membership based Non-Governmental Organization (voluntary organization) aims to cultivate the leadership abilities of young men and women in India. It is officially attached to Junior Chamber International (JCI). Every member gets equipped to serve the requirements of his own trade or profession in a much better way by the active participation in the activities of JCI India. JCI provides all the facilities and platforms for the free expression and lab for the self-development.

JCI India provides many unique and outstanding training programs which will definitely produce efficient community leaders and also it broadens the personality, the outlook and the ability to handle people and get along with them. The membership is offered to everybody regardless of color, cast and creed. Indian JCI works under various Acts like Income Tax Act of India, Societies Registration Act, and

Bombay Public Trust Act. JCI India is divided into 23 zones with a centralized secretariat at Mumbai. Current strength of JCI India is 33000 members. Official publication of JCI India is Challenge.

Section 4: Role of Social Capital in Civil Society

The current section attempts at analyzing the presence of social capital characteristics among the members of JCI (voluntary organization). As mentioned in the methodology, SOCAT and SC-IQ are constructed on the basis of six dimensions. Groups and networks, trust and solidarity, collective action and cooperation, information and communication, Social cohesion and inclusion and finally empowerment and political action are the six key dimensions identified as appropriate proxies for social capital. These dimensions are used to analyze the presence of social capital characteristics in JCI.

Dimension 1: Groups and Networks

This is the category most commonly associated with social capital. The questions here consider the nature and extent of a household member's participation in various types of social organizations and informal networks and the range of contributions that one gives and receives from them. It also considers the diversity of a given group's membership, how its leadership is selected and how one's involvement have changed over time. All these aspects are discussed below;

JCI Members are not restricted from holding membership in any other groups or associations like social groups, professional groups, cultural groups, young groups, sports groups, production groups, religious groups or spiritual groups, education groups, political groups, trade unions and any NGO's or civic groups like Red Cross and Rotary Club. Data collected under this dimension shows that 87.50 percent of members of JCI Chengannur have membership in other groups and 12.50 percent of members have membership only in JCI.

This is a characteristic of social capital that a person who is a member of a group has a tendency to have membership in more number of groups (Putnam, 2001). Compared to five years ago the JCI members participate in more number of groups or associations. The data reveals that the number of membership in other groups had increased for 71.87 percent of JCI members; approximately 21.87percent of members remain in same number of groups. At the same time 6.25 percent of JCI members had withdrawn memberships from some group.

Table 6. 1: Main benefits from joining JCI

Benefits	Frequency
Benefits households in times of emergency/in future	9.4%
Benefits the community	15.6%
Enjoyment/Recreation and self-esteem	3.2%
All the above	71.8 %

Source: Primary Data, 2016

Table 6.1 shows that after joining JCI about 71.87 percent of members agrees that they enjoy all these benefits, but about 9.37 percent of members receives benefits only get at times of emergency. Whereas 15.62 percent of member's claims that activities of JCI is for community benefit; only about 3.1 percent of members consider enjoyment/recreation / self-esteem as their main benefits from joining JCI.

Table 6.2: Services to Which Members Have Access (Percent)

Services	Yes	No
A) Education or training	87.50	12.50
B) Health services	100	Nil
C) Credit	78.12	21.87

Source: Primary Data, 2016

Table 6.2 shows that 87.50 percent of members have the access to attain educational and training services. The remaining 12.50 percent of members have the access but they are not able to receive all kinds of training due to difference in their educational level. The table reveals that 78.12 percent of members get credit facilities and remaining 21.87 percent of members have not received any credit from other members of JCI.

In the past five years, membership in the group has increased. When there is a decision to be made in the group, then the group members hold a discussion and decide together. Leaders in the group are selected by vote/ decision from all members. Approximately 78 percent of member's points out that leadership of JCI Chengannur is very effective, whereas only 21.87 percent of members reveals that group's leadership is somewhat effective.

Also data extracted with respect to services reveals that JCI interact or work with other groups occasionally at the time of organizing blood donation and blood detection camp or any medical camp like free eye test, awareness classes on AIDS, CANCER etc. Fund is generated from the sources like member's fees / dues, raising funds from the members at the time of emergency, and also from sources outside the community (i.e., funds are collected from the villages or from non-members by conducting some fest or entertainment programs). JCI Chengannur collects 7,000 rupees from all the members as annual fee, but some members contribute even more than that. About 15.62 percent of members contribute 7,000 rupees only, rest 84.37 percent of members contribute more than 7,000 rupees.

JCI Chengannur receives advices and expertise ideas from different sources within the JCI, and also from sources outside the group who are expert enough to guide the working of JCI.

Networks

The response of all the members of JCI Chengannur indicates that their number of friends has increased.

Table 6. 3: Number of People from JCI Willing to Provide Some Money for the Members

Range	Frequency
No One	21.87%
One or Two People	9.37 %
Three or Four People	15.62%
Five or More People	53.12 %

Source: Primary Data, 2016

Table 6.3 indicates that about 53.12 percent of members would be able to get money from five or more members. Three or four members would be willing to help 15.62 percent of members and one or two members would provide money to 9.3 percent of members. No one would be willing to provide money for the remaining 21.87 percent of members. The data describes that more than half of JCI members are able to get money from five or more people. This result implies that willingness to provide financial help is high among JCI members.

Table 6.4: Number of Members Seeking Help of JCI Members to Take Care of their Children

Range	Percentage
Definitely	59.37
Probably	12.50
Probably Not	21.87
Definitely Not	6.25

Source: Primary Data, 2016

If members suddenly had to go away from home for a day or two, then 59.37 percent of members would definitely seek the help of JCI members to take care of their children. Probably, 12.50 percent of members would seek their help. On the other hand, 21.87 percent of members would probably not seek help and about 6.25 percent of members would definitely not seek the help of JCI members to take care of their children. Generally, people live in a street will seek the help of neighbors to take care of their kids when they go out for work. This is a kind of social capital which can be accessed out of the trust and bond with the neighbors (Coleman, 1988). The analysis shows there is a strong bond among JCI members and as a result, more than half of the members would seek the help of neighbors to take care of their children.

Table 6.5: People with Personal Problem who Turned to the JCI Last Month for Assistance

Range	Percentage
No one	0
One or two people	28.12
Three or four people	53.12
Five or more people	18.75

Source: Primary Data, 2016

Table 6.5 explains that about one or two people with a personal problem have approached 28.12 percent of members of JCI. At the same time about three or four people has turned to 53.12 percent of members and about five or more people have approached 18.75 percent of members.

Table 6.6: Economic Status of People Who Approach the JCI Members for Assistance

Different Economic Status or Class	Percentage
Similar economic status	0
Higher economic status	0
Lower economic status	37.50
All economic class or status	62.50

Source: Primary data, 2016

Table 6.6 indicates that people (with personal problem) from all economic status (similar, lower and higher) have approached 62.50 percent of members of JCI for assistance. The lower economic status people have approached only 37.50 percent of members of JCI. Data collected from various variables discussed above indicates that there is the presence of group participation and network characteristics of social capital among the members of JCI.

Dimension 2- Trust and Solidarity

In addition to the canonical trust question asked in a remarkable number of cross-national surveys, this category seeks to procure data on trust towards neighbours, key service providers, strangers and how these perceptions have changed over time.

In general, 84.37 percent of members responded that most of the people from JCI can be trusted and about 15.62 percent of members said that they cannot be too careful in dealing with other people in JCI. In this various aspects of trust is analyzed to understand the level of trust among JCI members in different situations. About 81.25 percent of JCI members strongly disagree that JCI members are likely to take advantage of being a co-member and 18.75 percent of respondents agree somewhat to this statement. Approximately 84.37 percent of JCI members agree strongly that most of the JCI members are willing to help others (if they are in need) and 6.25 percent agree somewhat and remaining 6.25 percent of JCI members disagree

to this statement. Data in terms of lending and borrowing reveals that about 75 percent of respondent strongly disagree they do not trust each other and 18.75 percent somewhat disagree and only 6.25 percent of respondents agree somewhat. Moreover, data derived on the basis of change in level of trust among JCI members points out that the level of trust has got better for 68.75 percent of JCI members and the level of trust stayed about the same for 31.25 percent of members.

Table 6.7: Contribution of JCI Members to a Community Project Which Does Not Directly Benefit Members

	Time	Money
Will contribute	81.25%	93.75%
Will not contribute	18.75%	6.25%

Source: Primary Data, 2016

Table 6.7 shows that approximately 81.25 percent of members have contributed their time for a community project which does not directly benefit members (but benefits many

others in the villages / neighborhoods). About 93.75 percent of members have contributed their money for a community project. However, 18.75 percent of members have not contributed time and 6.25 percent of members have not contributed money to such a project. This result points out that the majority of JCI members are ready to contribute their money and time to a community project. Therefore, it indicates that there is strong presence of solidarity among JCI members. Within the group, they work with a common interest and mutual support.

Dimension 3: Collective Action and Cooperation

Collective action refers to action taken together by a group of people whose goal is to enhance their status and achieve a common objective. This category explores whether and how household members have worked with others in their

community on joint projects or in response to a crisis. It also considers the consequences of violating community expectations regarding participation. Data under this dimension reveals that in last 12 months, about 93.75 percent of members have worked with JCI to do something for the benefit of community. Majority of the members cooperate with JCI either by contributing time or money and even some members contributes both. Data reveals that if something unfortunate happened to someone in JCI such as a serious illness or accident, then approximately 84.37 percent of members would be very likely to get together to help them. On the other hand, 15.62 percent of members will be neither likely nor unlikely to help them. If such a serious illness or accident happens to a non-member of JCI, then 71.87 percent of members would be very likely and 6.25 percent of members would be somewhat likely to help them.

These findings show that cooperation among members and their collective action has smoothened the functions of JCI. The presence of these characteristics is evident among JCI members as they have the potential and willingness to work together for the group and for the society. This shows that JCI is able to extend contact beyond the members of the neighbourhood. Collective action is the product of civil society organisations having high level of networks and group participation (Burt, 2000). JCI is a civil society organisation that has the ability to generate both individual and community benefits.

Dimension 4: Information and Communication

Access to information is being increasingly recognized as central for helping poor communities to have a stronger voice in matters affecting their well-being (Grootaert et al., 2002). This category of questions explores the ways and means by which poor households receive information regarding market conditions and public services and the extent of their access to communications infrastructure. The data reveals that newspaper, television, internet, relatives, friends, neighbors, associ-

ations or groups and NGOs are the most important sources from which JCI gathers information about the working of government and market. All the members of JCI state that their access to information has improved compared to five years ago due to the advancement of information and communication technology.

The collected data reveals that all the members use telecommunication to communicate each other and to inform the activities of JCI. Approximately 87.50 percent of members use internet to contact each other and to communicate the activities of JCI. The main two means of communication that members use to inform the group activities with non-members are print media and social networking sites. Data shows that 90.62 percent of members depend on print media and about 87.50 percent of members use social networking sites. Approximately 62.50 percent of members use telecommunication to communicate with the non-members. All the members (100 percent) agree that social networking sites have improved the ease in communicating information related to the activities of JCI.

Table 6.8: Range of Usage among Different Social Networking Sites

Social Networking Sites	Percentage
Facebook	87.50
WhatsApp	81.25
Twitter	56.25
Google +	43.75

Source: Primary Data, 2016

Among various social networking sites Facebook and WhatsApp are the main two social networking sites used in JCI for communicating the activities of JCI with members and public. About 87.50 percent of members use Facebook and approximately 81.25 percent of members use WhatsApp to communicate the activities of JCI. The results under this

dimension indicate that almost all members communicate each other and collect information. Data also reveals that JCI members have access to all kinds of communication infrastructure.

Dimension 5: Social Cohesion and Inclusion

“Communities” are not single entities, but rather are characterized by various forms of division and difference that can lead to conflict (Coleman, 1988). Questions in this category seek to identify the nature and extent of these differences, the mechanisms by which they are managed and which groups are excluded from key public services. Questions pertaining to everyday forms of social interaction are also considered.

Table 6.9: Feeling of Togetherness among the Members of JCI

Range	Percentage
Very Distant	0
Somewhat Distant	0
Neither Distant Nor Close	12.5
Somewhat Close	21.87
Very Close	65.62

Source: Primary Data, 2016

Table 6. 9 shows that about 65.62 percent of members feel that they are very close with each other and about 21.87 percent of members feel that they are somewhat close with members. It is found that 12.5 percent of members feel that they are neither distant nor close among the members of JCI. Data reveal that the characteristics of JCI members are not the same.

The members of JCI Chengannur belong different age, gender, occupation, religion, caste, family, neighborhood, political party, educational background and income level. There are members from different age groups varying from 18-40 and above 40 years. About 68.75 percent of members belong to the age group of 18-40 and 31.25 percent of members are aged above 40 years. About 81.25 percent of members are from the

same neighborhood / village and 18.75 percent of members are from different villages. Only 15.62 percent of members are from the same family and rest 84.37 percent of members are from different family.

Members are from different religion, educational background, income level and political view. Also they belong to different occupation. Majority of the members (46.87 percent of members) are businessmen, then about 34.37 percent of members are professionals like Doctors, Engineers, Advocates and the rest 18.75 percent of members are not employed. Gender wise data reveals that majority of members are male (65.62 percent) and remaining 34.37 percent of members are female.

Data also show that there are often differences in characteristics between people living in the same village/ neighborhood. For example, differences in wealth, income, social status, caste, religious, political beliefs etc. Likewise, all these characteristics are different for members in JCI. About 21.87 percent of members face problems due to these differences and the remaining 78.12 percent of members face no problems related to the differences in characteristics.

Table 6.10: Reasons for Problems of JCI Members

Differences in Characteristics	Percentage
Education	18.75
Landholdings	0
Income/ wealth/ material possessions.	0
Social status	0
Between men and women	0
Between younger and old generations.	12.50
Between long-term and recent members	21.87
Political party	0
Religious belief	0
Caste	0

Source: Primary Data, 2016

Table 6.10 points out that about 18.75 percent of members face problem due to educational differences. JCI provides many training programs for the members but for some training programs can be accessed only by members with good communication skill. So only highly qualified members are able to attend national and international training programs. Another problem which members face is due to the difference between younger and older generation (generation gap). Approximately 12.50 percent of members face this problem. Then about 21.87 percent of members face problems arise due to differences between long-term and recent members. But these differences and problems has not restricted anyone from participating in any community activities of JCI. Members do not face any problems in regard with difference in landholding, wealth, caste, gender, political view etc.

Sociability

Table 6.11: Number of Times JCI Members Have Met Each Other in Public During Last Month.

Range	Percentage
Daily	21.87%
Once in a month	56.25%
Twice or more in a month	9.37%
Never	12.50%

Source: Primary Data, 2016

In the last month about 21.87 percent of members have met each other daily and about 56.25 percent of members have met at least once in last month (at public places either to talk or to have food / drinks). Approximately 9.37 percent of members have met twice or more in last month, remaining 12.50 percent of members have not met any co-member during last month in a public place.

Table 6.12: Number of Times Members Have Visited Each Other's House

Range	Percentage
At least Once	40.62 %
Twice	34.37 %
Thrice or more	25.00 %
Never	0%

Source: Primary Data, 2016

Table 6.12 shows that at least once the members have visited the house of 40.62 percent of JCI members during the last month and also visited twice the house of 34.37 percent of JCI members. 25 percent of members have visited houses thrice or more. Analysis reveals that the people who visits them and those they have visited are mostly from different religious group, caste, social status and economic status.

Table 6.13: Number of Times Members Got Together for Recreational Activities

Range	Percentage
Daily	43.75%
Once or twice	21.87%
Thrice or more	6.25%
Never	28.12%

Source: Primary Data, 2016

In the last three months, about 43.75 percent of members have got together daily with JCI people to play games, sports, or other recreational activities. About 21.87 percent of members have met together for once or twice and about 6.25 percent of total members have met together for thrice or more in last three months to play games, sports or recreational activities,

but approximately 28.12 percent of total members have never met together to play in the last three months.

Table 6.14: Number of Times Members Have Attended A Festival or Ceremony of JCI Members

Range	Percentage
Once or twice in last 3 months	53.12%
Once or twice in last 6 months	37.50%
Once or twice in last 12 months	9.37%
Never	0%

Source: Primary Data, 2016

Table 6.14 indicates that about 53.12 percent of members have attended once or twice a festival or ceremony like wedding, funeral, religious festival etc. of JCI members in the last 3 months. About 37.50percent of members have attended once or twice in last six months a festival or ceremony and only about 9.37 percent of members have attended it for once or twice in the last 12 months. Data indicates that all the members have attended the ceremonies at least once or twice in the last 12 months. These variables are presence among JCI members and thus it indicates that the sociability characteristic of social capital is evident among JCI members. All these findings convey that Social cohesion and Inclusion are sound among the members of JCI.

Dimension 6: Empowerment and Political Action

Empowerment is a means designed to improve the level of autonomy and self-determination in people and in communities so as to represent their interests in a responsible and self-determined way. Individuals are “empowered” to the extent that they have a measure of control over institutions and processes directly affecting their well-being (Grootaert et al., 2002). The questions in this section explore household member’s sense of happiness, personal efficacy and capacity to influence both local events and broader political outcomes. Data

under the dimension of empowerment indicates that, about 90.62 percent are happy themselves to be a member of JCI and remaining 9.37 percent are moderately happy. No one is unhappy to be a member of JCI. Response of 62.50 percent of members is that they have control on over all decisions and about 28.12 percent of members have control over most decisions. Remaining 9.37 percent of members have control only over some decisions. The result implies that all the members of JCI have at least control over some decisions.

Data indicates that about 68.75 percent of members feel that they are totally able to change life and about 31.25 percent of members are mostly able to change life. Thus this analysis indicates that all members can either totally or mostly have the power to make important decisions that change the course of life. Therefore, the data describes that JCI members either totally or mostly have the power to make important decisions that change their course of life.

Table 6.15: Impact That JCI Members Have in Making Their Village a Better Place to Live

Range of Impact	Percentage
A big impact	78.12 %
Some impact	21.87%
No impact	0%

Source: Primary Data, 2016

Table 6.15 indicates that about 78.12 percent of members responded that they could make big impact in making their village / neighborhood a better place to live. Approximately 21.87 percent of members responded that they could make only some impact in making their village / neighborhood a better place.

Table 6.16: Activities which are Performed by JCI Members Among the Following

Activity	Yes	No
A. Attend a village/neighborhood council meeting, public hearing, or public discussion group	93.75%	6.25%
B. Met with a politician, called him/her, or sent a letter	56.25%	43.75%
C. Participated in a protest or demonstration	87.50%	12.50%
D. Participated in an election campaign.	81.25%	18.75%
E. Alerted newspaper, TV or social media to a local problem.	75.00%	25%
F. Notified police or court about a local problem.	59.37%	40.62%

Source: Primary data, 2016

Table 6.16 represents that in the last 12 months about 93.75 percent of members have attended a village/ neighborhood council meeting, public hearing or public discussion group. About 56.25 percent of members have met or called a politician and about 87.50 percent of members have participated in a protest or demonstration. During the last election, majority of the members (81.25percent) have participated in election campaign. Approximately 75 percent of members have alerted newspaper / TV / social media to a local problem. Also about 59.37 percent of members have notified police or court about a local problem.

Data reveals that all the JCI Chengannur members have cast their vote in the last election. Also data reveals that, irrespective of their caste or sex the members have cast their vote in past years. JCI Chengannur has organized a “Meet the

Candidate” program during last election. This program provided a platform for the candidates and the people in Chengannur to meet and interact face to face. At present, two ward counselors in Chengannur are members of JCI. Among them, one was elected consecutively as the councilor for the last four times and other one was elected consecutively for the last two times.

About 71.87 percent of JCI member’s reveals that local government and leaders will consider the concerns voiced by them and about 18.75 percent of member’s points out that government shows only little concern. The results under this dimension showsthat there is the presence of empowerment, happiness, political influence and confidence among JCI members. The data analysis implies that the presence of each and every dimension is clearly evident among JCI members. JCI is a heterogeneous group and therefore there exists dissimilarity in economic, social and political characteristics among JCI members. Initially, these differences may affect their trust. Over the years the difference in characteristics are overridden by their networks and trust sets in. Also, this study points out that JCI has the capacity to generate both individual and community benefits and therefore this shows its potential to create civil society.

Findings

Empirical studies find out that there is an important connection between social capital and civil society. Individuals acquire social capital through participating in informal networks, registered organizations, association of different kinds and social movements, and it represents the sum of these experiences. Putnam’s work in Italy proposes that membership in voluntary organization have spillover effects that lead to better state-society relations through the mediating level of civil society (Putnam 1993). It is believed that through membership in different organizations and networks individuals will develop joint interests and shared norms, which in turn will lead to trust and better understanding of differences in culture, background and

lifestyle. If this is possible, then civil society and organizational development ought to be encouraged.

Thus, this study focuses to examine the presence of social capital characteristics in a voluntary organization and the role of social capital in civil society. SOCAT (Social Capital Assessment Tool) and SC-IQ (Social Capital Integrated Questionnaire) are the two tools used to measure social capital. Both quantitative and qualitative data had been collected for the analysis. Six dimensions of social capital (say Groups and networks, Trust and solidarity, Collective action and cooperation, Information and communication, Social cohesion and inclusion & Empowerment and political action) were taken to measure the characteristics of social capital in JCI. It is found from the study that all the six dimensions are presence among JCI members. Further it indicates that the level of social capital is high in JCI and whereby it shows the potential of JCI to play the role of a civil society. These findings can be justified with the help of existing theories and from the data collected from JCI.

Existing theories supports that voluntary associations with high level of group participation, networks and collective action encourages organizational development and plays the role of civil society. Data indicates a high level of group participation, networks and collective action in JCI. Apart from the training programs for the members, JCI conducts many programs and services for the community as a whole.

Consequently, this study firmly states that JCI fall into the category of civil society as they are not operated by the government but they are group of people in a society who volunteer their time and resources for fulfilling the needs of community as a whole.

Conclusion

The study focuses to analyze the presence of social capital characteristics and the role of JCI as a civil society. To develop a civil society, an ever-increasing number of people and

various types of activities, co-operation, collective action, decisions etc... are required. JCI Chengannur has initiated and implemented numerous numbers of major as well as minor projects to improve the overall welfare of members and people in the society. The members of JCI belong to different parts of the society and represent its diversity. Thus, their ideas and interest are different from each other. In this regard, the NGOs or voluntary groups are required to provide targeted programs / services which focus on common needs and interests of people in a society. From the study, it is clear that JCI organizes many programs and services which protect the needs and interest of common people. Also, JCI provides special trainings and educate members to shape them as a better person in personal life, professional life and in social life. Moreover, JCI encourages members to take part in civic activities. Thus, JCI provides direct and indirect platforms for members to help others in the society. The level of trust, cooperation, network, inclusion, empowerment, sociability, political action etc. are high among the members of JCI. Thus, the study concludes that JCI is working successfully as a voluntary association as its presence of social capital characteristics and its potential to play the role of civil society is clearly evident.

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IPR regime and Developmental Implications of IP Asset Intensive Industries

Beena P L & Siddik Rabiyyath

In the neoclassical framework, the growth of a business is akin to the growth of output and profit, which depends on the quality of the output and that perhaps, determined by the forces of the market. However, Ronald Coase asked a basic question that if market forces can facilitate the growth process then why there a firm exists in the market economy and can we rationalize the function and performance of the firm vis a vis the market (Coase 1937). The question is very relevant because, unlike having a firm as an equivalent unit of an individual who operates in the market, a real firm is an entity that fails the functioning of the market per se. That is, within a firm, the institutional understanding of the contract, property rights and asymmetry of information play a crucial role and rationalizes the existence of firm as a unit of production, which indeed different from the market functioning as the neoclassical theory suggests. In a nutshell, as the existence of the firm in the modern industrial structure, the production and marketing functions of the firms and hence its growth is determined through different institutional framework rather than the market. Generally, such institutional safeguards often missed from the economic analysis of the industry. We argue that the legal and extralegal institutions are a precursor of having economic production and exchange. For instance, the role of intellectual property rights (IPR) in terms of the patent,

trademark, designs, copyrights, trade secrets, etc to make a firm or industry competitive in the market environment is by and large an institutionally guarded process. The surge in IP Assets in India is an indication of such a type of institutional change. Therefore the study of developmental implications of the firms and industries are inextricably linked to the existence of different nonmarket institutions, which often marked outside the neoclassical framework. The current paper proposes to analyse the developmental implications of firms with a special reference to selected IP asset-intensive industries through the Intellectual Property Rights institutions. The paper is divided into four sections including an introduction and conclusion. The first section would attempt to develop an analytical framework by surveying existing theoretical and empirical literature. The study would make an effort to analyze the impact of TRIPs on innovation/technological activities in general as well as across industries in section 2. Technological changes or activities, owing to their intangible properties, can only be measured by indirect approaches—that is, through the input method and output method. Technological activities in terms of input method would be followed with an exercise on the output method of the technological activities. The impact of surge in IPR assets on the market structure and profit margin and firms's behaviour is analysed in section 3. This section would also analyze the developmental implications of the TRIPs regime based on selected economic performance indicators. The fourth section would sum up the summary of the major findings.

Section 1.1: Empirical Literature Survey

As part of WTO agreements, India has implemented a new IPR regime upon which firms have to follow product patent instead of a process patent. This new institutional mechanism is expected to boost the technological capabilities of the Indian industry. The new agreement on IPR states that patent protection must be available for inventions at least twenty years, while industrial designs could be protected for ten years. 'Compulsory licenses' can be allowed by the government

to the competitors to produce products only if the patent holder or protected design holder abuses their rights by refusing to supply a product such as life-saving drugs in the domestic market (see Article 7 of the TRIPS agreement). But compulsory licensing of trademarks is not permitted (see Article 21 of the TRIPS agreement (see Arup, 2008). Similarly, the scope for copying and modifying foreign technology as part of the national industrial program is significantly reduced under the new agreement on TRIPs. Although the linkages between IPR regime and economic development are difficult to measure (see Maskus, 2008, p.50), the defenders of TRIPs argue that stronger protection of intellectual property rights is essential for innovation, knowledge generation and therefore economic development. Apart from this, strong IPR would bring FDI and advanced technology created by developed countries. It is argued in the literature that Inward FDI can lead to technological spillovers and vocational skills which is useful for R&D whereas imports of advanced products such as capital goods produced by developed countries can help host economy to exploit natural resources and surplus labour (Hassan et.al, 2009) . It is further argued that this could be possible only for those developing countries with strong technical absorptive capabilities.

It is further argued in the literature that the existence of trademarks plays a part in allowing greater flexibility in the way production is organized. Upstream firms specialize in marketing and innovation, while downstream firms specialize in supplying (Greenhalgh and Rogers,2010, p. 310). However, the significance of knowledge flows from advanced country firms to support technological upgrading of developing country suppliers seems to be contributing little to firms' progression from Original Equipment Manufacturer (OEM) to Original Design Manufacturer (ODM) and Original Brand Manufacturer (OBM) positions in global chains (Schmitz, 2004; Giuliani, et.al; 2005). The local investment in creating and cumulatively deepening knowledge resources provide the necessary basis for

participating in global value chains and networks (Ernst and Kim, 2002). A formal registration system for trademarks would discourage deliberate imitation of products or services by competitors, and therefore trademarks are also crucial for innovation. Anti-competitive distortions associated with perception, advertising and the legal monopoly on the use of the trademark can create potential distortions (Economides, 1997). Trademark activity by rivals in any industry can reduce the firm's value of output, by putting downward pressure on prices and profit margins through the business-stealing effects rather than knowledge spillovers (Greenhalg and Rogers, 2007).

It is evident that the share of trade-mark registration in India is much higher than patent registration although its impact on brand differentiation across industries is not known (<http://www.tradingeconomics.com/india/trademark-applications-total-wb-data.html>)¹. Trademarks are largely related to product innovations, whereas patents are related to a mixture of product and process innovations (Greenhalgh and Longland 2001). According to Edquist et al., (2001), product innovations are employment creating while the process innovations are employment destroying. The net increase or decrease in employment outcomes of industrial development would largely be determined by the relative strength of the effects of product versus process innovations. It is further argued in the literature that the technological capabilities of developing countries are very weak and generally related to the process innovations. Ray (2009) argued that the majority of Indian industries except for pharmaceutical and information & communication technology (ICT) are having weak technological capabilities and are highly dependent on technology imports. The former set of arguments implies that the performance of the industry or any particular firm is relatively good due to a relatively better strength in their different intellectual property rights, whereas the latter set of argument replicates a reverse effect of the industry of firm due to relatively poorer intellectual property rights.

A different strand of literature put a different view on IPR on innovation and profitability or growth and competitiveness of the firm vis a vis innovation by firms under IPR. For instance, Grossman and Helpman (1991) showed that stronger protection or production subsidies would lead to a fall in the global technical innovation rate. Similar to this, the work of Boldrin and Levine (2013) review that innovation historically (19th and 20th Century) been curtailed by the patent and copyright. However, the evidence-based on the cross-country panel data on R&D investment, patent protection and other country-specific characteristics covering the period 1981-95, indicated that strong IPR has a positive effect on R&D investment and it encourages innovation (Kanwar and Evenson, 2003; Mani and Nelson 2013). The impact on innovation through R&D investment is indirect, rather than the direct inference. Even so, another study by Kanwar (2012 a) based on the database for US multinationals for the period 1977-2004, could not find any significant evidence regarding the relationship of stronger IPR and attraction of R&D activities by US MNEs. Whereas the size of the host countries' market and skilled workforce were found to be the major attractors for the R&D activities of USMNEs in host countries. Bessen and Maskin (2000) showed that stronger protection would limit imitation and thereby inhibit technological change if innovation is sequential and complementary as in certain industries like software, semiconductors, and computers. Based on the survey of 650 American R&D executives across 130 industries, great emphasis on patent protection for pharmaceutical and chemical industries was given by executives (Levin et al. 1987 as cited by Kanwar and Evenson 2003). Falvey et al. (2006) argued that middle-income countries do not benefit from stronger IPR regimes like high and low-income countries as the positive effects from FDI and trade get offset by the negative effects due to the inability by middle-income countries to imitate and use knowledge. TRIPS can also impose a lot of additional costs on developing countries in the form of increased royalty payments, even the theft of traditional knowledge and abuse of dominance

(Chang, 2003; Fabre, 2015). On the flip side, analysis on the impact of patent regime on innovation based on successful patent applications in US covering 33 years in a study by Qiu and Yu (2010) argued that US market is sufficiently grown and profitable too so that it could provide innovation incentives and strengthening of IPR would only increase the US innovators' rent but not innovation per se.

Jenson and Webster have empirically shown that the trademark growth in Australia is more of a demand-driven phenomenon due to the rising consumer income and demand for more product differentiation rather than supply-driven one (see Schautschick and Greenhalg, 2013). The share of registration by foreign residents is inversely related to the level of per-capita income. Similarly, the degree of domestic brands in the home market and their presence in the international market is greater with the level of economic development (Baroncelli et al.2005). In the context of developed countries, service sectors and deregulated and restructuring sectors were found to be trademark-intensive sectors (Schautschick and Greenhalg 2013). In the context of developing countries, it was argued that trademarks and similar protections are important for traditional artists and communities that create products that can also reflect their culture and social identities. It is further argued that design rights, industrial design rights, copyrights, patents, and trademarks could be useful for small firms operating in industries such as textile, toy, publishing, biotechnology and retail industries (Chaudhuri, Goldberg, and Jia 2003; WIPO 2006 as cited in Singh 2015,p.147).

Section 1.2: Analytical Framework

The inferences drawn from the earlier literature are fascinating that despite its direct ill effect on innovation, the profitability and competency of the firms had improved drastically due to IPR which naturally increase the urge of getting IPR by firms and individuals. The observation makes us hypothesize those firms or respective industries that are filing

more IP Assets are expected to have higher profitability than their urge for improving future innovation. The observation guides us to make our theoretical proposition that institution driven monopoly or protection based expected income leads a firm to go for more IPAssets. The result is an edge in the industry. Such an edge by industry is antithetical to the view that patent improves the innovation which attributes to higher competitiveness and resultant profitability. The principle which leads us to make such a proposition is the new institutional framework, which often offers us to understand economic interaction through the lens of institutions, where market is one of the institutions, which guide or facilitate the economic activity². In a nutshell, the performance of firms under real-world economic situations mostly driven by the institution rather than market mechanism per se.

Though there are many empirical studies on Innovation and Intellectual property, most of those studies either looked at the association of R&D and patents within manufacturing sector (Griliches, 1981; Arora, 2000; Arora, 2001; Kanwar and Evenson 2003; Kanwar 2012), or on the technological transfer through FDI inflows and its impact on productivity (Kathuria, 2010; Kachoo, Ruchi and Madan 2018). However, no attempt has been made to understand the technological activities of IP Asset intensive industries and how it later helps the firms/industries to be a dominant and effective player in the business through the lens of intellectual property rights institutions. The proposed study would try to fill this gap based on four IP Asset intensive industries such as Drugs & Pharmaceuticals, Electricals & Electronics; Software and Telecommunications.

Objectives

- Analyse the innovation activities of Indian industries in terms of input and output measures.

- Analyse the association between surge in IP Assets and Innovation activities of IP Asset intensive industries.
- Analyse the impact of IP assets on the market structure, profit margin and other performance behaviour of IP Asset intensive industries.

Data and Methodology

The study would make use of the data that originates from various sources such as the PROWESS database published by CMIE, Annual Report of the Office of the Controller General of Patents, Designs, Trademarks and Geographical Indication and the United States Patent and Trademark Office (USPTO). The impact of patent and trademark on industrial performance can be measured by matching domestic and international records of these IP assets to the financial data for firms in the respective industries. Firm-level data for four IP intensive industries such as the pharmaceutical industry, Telecommunications, Software and Electrical & Electronics for the period 1990 to 2018 have been obtained from the Prowess database published by the Centre for Monitoring Indian Economy (CMIE). The database provides information of both listed and unlisted firms from a wide cross-section of the manufacturing, services, utilities, and financial sectors, covering 60%–70% of the organized sector in India, 75% of corporate taxes paid, and 95% of excise duties collected by the Government of India (Beena 2014;2018). Firms in this database are classified into various industries according to the National Industrial Classification 2008 (CSO, 2008).

This section attempts to analyze the impact of TRIPs on innovation/technological activities in general as well as across industries. Technological changes or activities, owing to their intangible properties, can only be measured by indirect approaches—that is, through the input method and output method. Input measures include R&D expenditure (Aggarwal 2002), and import of technology and royalty payments (Ray

2001; Griliches, 1979; Mallik 2014) whereas output measures include patent granted (Lemley and Feldman 2016) to first name inventor (NIS Training Manual 2016 and publications). We accordingly employ company-wise and industry-wise R&D expenditures, import of capital goods (embodied- and disembodied) and industry-wise number of patents granted to measure the technological activities. This is followed with an exercise on the overall trends, pattern of patents, trademarks and design in India and its distribution across industries.

The origin of IPR goes back to many centuries. But the institution matured and took its modern configuration in the first half of the 19th century. Such assertion is particularly true for patents and trademarks. Patents are considered as a device to provide monopoly power to the inventor so that they could appropriate the returns to the invention. On the contrary, in the 19th century itself, an anti-monopoly movement referred to as antitrust practice was strengthened to address the issue of consumer who gets worse due to monopoly. That is, the creation of a patent or IP regime had a hand in hand existence with antitrust legislation. For instance, to protect the interests of the consumer, a series of acts such as the Sherman Act of 1890, Clayton Act of 1914, Federal Trade Commission Act of 1914 etc. came into being in the United States and in India, the Monopolies and Trade Restrictive Practices Act 1969 was in the same line. Both the view gives the picture that either profit-making through monopoly or consumer surplus through antitrust produced through the mechanism of an institution than a spontaneous two-party arrangement. Therefore, the neoclassical understanding of exclusive competitiveness driven industrial growth and profitability creates a sense of logical discomfort. Through the engagement, the paper is to make a fresh methodological intervention and try to interlink the firm as a profit seeker with the help of the IPR institution.

Let's first review the concepts and definitions of IP Assets i.e, patents, trademarks, designs & copyrights before

analysing the growth pattern of these assets across industries and their technological activities.

Patent: Patents are aimed at protecting a particular type of invention- not basic research, but applied inventions, something reduced to a particular practice and applied in a specific endeavor (Lemley and Feldman, 2016). A patent is a legal document that grants monopoly rights over a specific innovation for a specified period (~20 years). To provide incentives to innovate: if inventions could be copied, nobody will incur the fixed costs of developing it (NIS Manual, 2016). There are essentially two types of patents: Utility Patents for new inventions and Design Patents for ornamental changes. The patent statistics in innovation assessment was first used by Jacob Schmookler (1966).

First Name Inventor: USPTO assigns a patent to a country based on the country of citizenship of the first-named inventor. It is possible for an MNC to set up its R&D facility in a foreign location, such as India, and then take out patents at the USPTO based on research done in India. USPTO will term these patents as Indian patents although its actual ownership or assignee is an MNC. Therefore, an increase in the patent count emanating from India may not be because of India becoming more innovative but India is becoming an important location for innovative activities (NIS Training Manual, 2016).

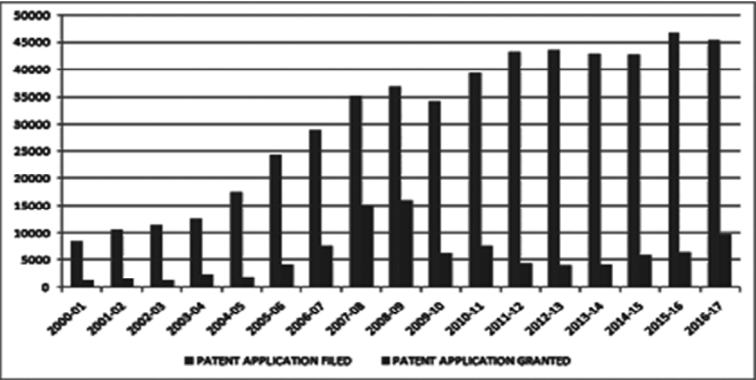
While many studies brought out the advantages of using patents as an innovation indicator, there are also studies (Griliches, 1990; Smith 2005) pointing out the problems related to relying only on patent statistics to capture the innovation. Oslo Manuel (OCDE, 2005) argues that patents do not reflect the different sources and shapes through which innovation occurs, especially in the service sector where the organizational change and the co-creation of new solutions with clients often take place beyond the scope of R&D labs. Given this context, Trademarks have also been used as an innovation indicator by many studies. Trademarks are used to signal product quality to

the market (Landes and Posner, 1987). Trademarks are more downstream related to the launching of new products and helping them get established in the market rather than to the inventive step itself as happens with patents. Firms, therefore, need to invest further to keep and improve the quality of their trademark-protected products as the brands associated with existing trademarks gain wider recognition.

Section 2.1: Trends and Pattern of IP Assets in India

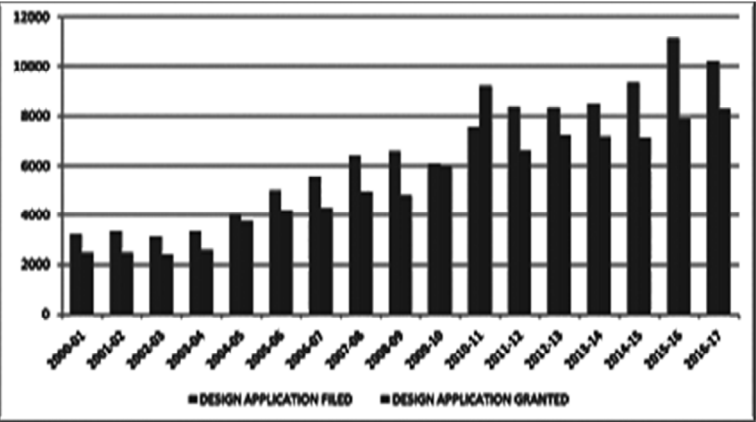
An attempt has been made in the following section to analyze the growth pattern of IP assets (such as Patents, Trademarks, and Designs) after compiling statistics on patents applications & registrations, trademark applications & registrations, Design applications and registrations for the period 2000 to 2017. Such exercise is expected to give an understanding regarding the growth process of IP Assets before and after the TRIPs regime. Thus from our analysis, it is noted that the total number of granted IP Assets during 2000 is 14202 which have increased to the level of 121150 during 2005-06 and that has further increased to 26819 in 2017. The number of trademark registration is much higher than the patents and designs. For instance, the number of trademarks registration during 2000 was around 14202 during 2000 which is much higher than the number of patents granted (118) and designs (240). But the number of trademarks has consistently increased to the level of 250070 in 2017 which is much higher than the number of patents (9847) and designs (8276). However, intensity of trademarks and patents granted is much lower than the intensity of designs although it is showing a consistent growth during the post-TRIPs regime (2007 to 2017) as compared to the pre-TRIPs regime (2000- to 2006) (Figure 7.1, 7.2 and 7.3).

Figure 7.1 ThePattern of Patent Application and Granted During 2000-01 to 2016-17



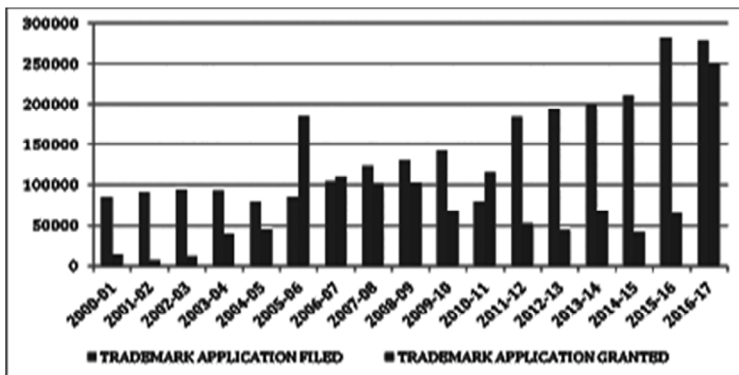
Source: Annual Report of the Office of the Controller General of Patents, Designs, Trademarks and Geographical Indication, Government of India.

Figure 7.2 Pattern of Designs Filed and Registered During 2000-01 to 2016-17



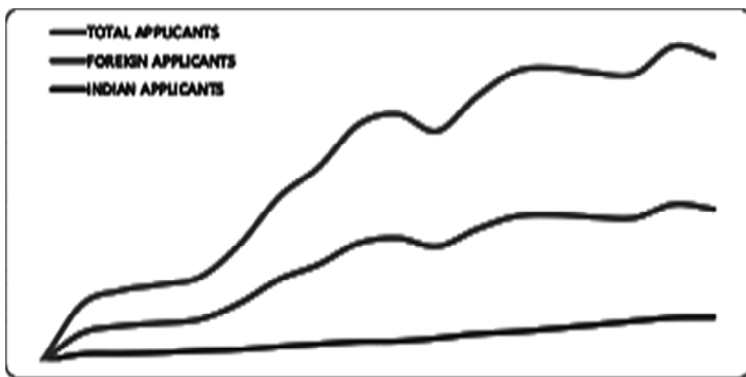
Source: Annual Report of the Office of the Controller General of Patents, Designs, Trademarks and Geographical Indication, Various years, Government of India.

Figure 7.3 Pattern of Trademarks Filed and Registered During 2000-01 to 2016-17



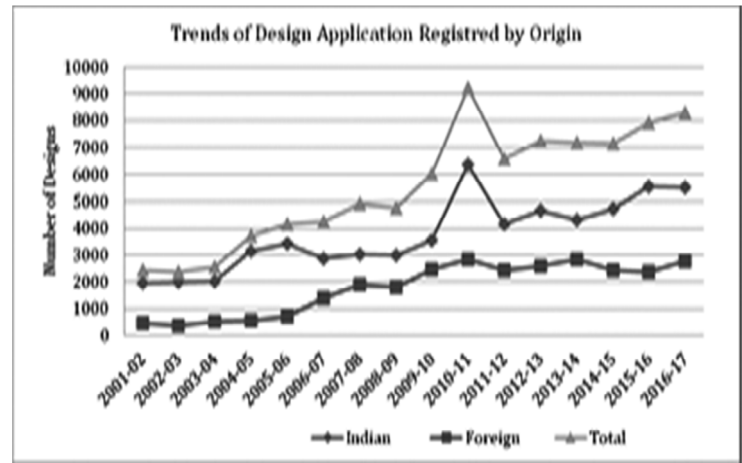
Source: Annual Report of the Office of the Controller General of Patents, Designs, Trademarks and Geographical Indication.various years.

Figure 7.4 Number of Patent Applications



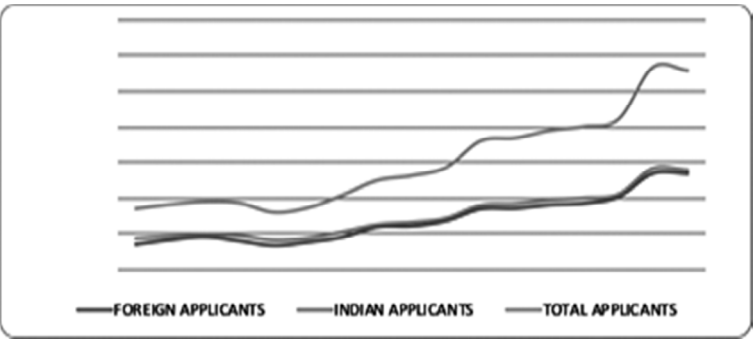
Source: Annual Report of the Office of the Controller General of Patents, Designs, Trademarks and Geographical Indication. Various years.

Figure 7.5 Trends of Design Applications Registered by Origin



Source: Annual Report of the Office of the Controller General of Patents, Designs, Trademarks and Geographical Indication, Government of India.

Figure 7.6 Trends of Trademark Applications Registered by Origin



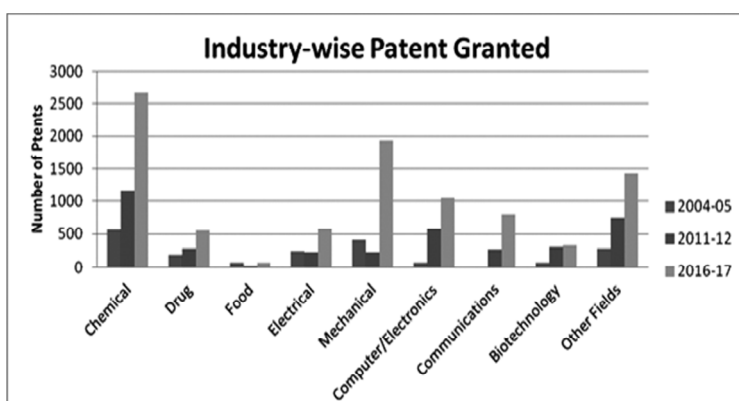
Source: Annual Report of the Office of the Controller General of Patents, Designs, Trademarks and Geographical Indication, Government of India.

Thus it is quite clear that there is a growing trend towards several patents, designs and trademarks applications/granted/registered especially during the post-TRIPS regime. Out of total IPR assets, number of trademarks accounted for major share as compared to designs and patent applications (See Figures 7.1, 7.2 and 7.3). We have further analysed the ownership distribution of such IP assets. Figure 4 reveals that numbers of patent applications/granted to MNCs are much higher than to Indians. Similar observation is also made by earlier studies regarding patents (Mani 2018). However, Indian owners are holding relatively large share of rights on designs and trademarks as compared to MNCs (see Figure 7.5 and Figure 7.6). The factors determining the large presence of domestic firms securing more number of rights on designs or trademarks in India unlike in the case of patent grants need to be explored further.

An attempt has also been made here to understand the industry-wise distribution of these IP assets by compiling information on these assets on various industries. From this, it is evident that there is a surge in Patent granted across all the industries during post-2005. The number of patents granted in the industries such as Chemical, Mechanical, Computer & Electronics and Communications are significantly higher than the other industries such as Food, Biotech, Drugs & Pharma, Electricals etc (See Figure 7.7). Our analysis further reveals that Drugs&Pharma and Food industries are accounted for relatively large share of trademark registrations although many more industries are found to be active in Trademark registration (Table 15.1). For instance, it is observed that while top six industries accounted for almost 85 per cent of total patent granted, the share of trademark activities of these industries is only 35 per cent (Table 7.1 and Beena and Rabiyyath, 2019). Further the evidence indicates that the growth of patent granted is much lower than the growth of patent applications across industries. Similar trend is observed in the case of trademarks as well. This could be due to the fact that the process involved

for granting a patent or trademark is more time consuming than the previous regime. Interestingly, Drugs and Food industries are having relatively large share of trademark applications and registration as compared to the rest of the industries although the ratio of trademark registration to the trademark application is much lower in these two industries as compared to the other industries. Our analysis on the industry-wise distribution of the designs registration reveals that consumer and capital goods industries are accounting for major share (Table 7.2). Thus from the above exercise, it is quite clear that consumer goods industries are relatively less patent intensive as compared to the capital goods industries. These results are not surprising as it is shown in many other studies that consumer goods are more trademark intensive (Greenhalg et.al,2001). Further, the existing studies have shown a positive association between the trademark applications and several other innovation indicators such as Patents, R&D or new products launched. Such association is also more intense in service sector related industries and high tech industries such as Drugs and Pharma.

Figure 7.7 Industry-wise Patent Granted



Source: Annual Report of the Office of the Controller General of Patents, Designs, Trademarks and Geographical Indication, various years.

Table 7.1 Industry-wise Distribution of Total Registered Trademarks as on 2018

Industry	Sub Category	Trade Marks Registered	% of Total
Chemical	Chemical products used in industry, science, photography, agriculture, horticulture, forestry, manures etc	4023	1.61
	Paint and Varnishes	1692	0.68
Drug	Medical, Pharmaceuticals, Veterinary and Sanitary substances etc.	30654	12.26
Food	Meat, Fish, Poultry etc.	5136	2.05
	Coffee, Tea, Cocoa etc.	10453	4.18
	Agricultural, Horticultural and Forestry Products and Grains not included in other classes	4315	1.73
	Beer, Ale and Port, Mineral and Aerated Waters and Other Non-Alcoholic drinks not included in other classes	3970	1.59
	Wines, Spirits, and Liqueurs	1819	0.73
Electrical	Musical instruments (other than talking machines and wireless apparatus	513	0.21
	Installation for Lighting, Heating etc.	6010	2.4
Mechanical	Machines and Mechanic Tools, Motors etc.	5636	2.25
	Hand Tools and Instruments etc.	1322	0.53
Computer/Electronics	Scientific and technological services and research and design relating thereto, industrial analysis and research services, design and development of computer hardware and software	9025	3.61
Telecommunications	Telecommunications	3784	1.51
Other Fields		161718	64.67
Total		250070	100

Source: Annual Report of the Office of the Controller General of Patents, Designs, Trademarks and Geographical Indication., 2018. Other Fields means other industries.

Table 7.2 Industry wise Distribution of Design Applications as on 2018

Class Code	Products	2016-17
2	Articles Of Clothing And Haberdashery	545
5	Textile Piece Goods, Artificial, And Natural Sheet Material	606
6	Furnishing	410
7	Households Goods	451
9	Packages And Containers For Transport Or Handling Of Goods	684

12	Means For Transport Or Hoisting	1235
13	Equipment For Production, Distribution Or Transformation Of Electricity	165
14	Recording, Communications Or Information Retrieval Equipments	491
15	Machines	246
23	Fluid Distribution Equipment Etc	859
24	Medicals And Laboratories Equipments	245
1,3,4, 8,10,11, 16-31, 33,99	Others	4276

Source: Annual Report of the Office of the Controller General of Patents, Designs, Trademarks and Geographical Indication, 2018.

An attempt has also been made here to compare the technological activities of leading firms in those industries in terms of their market share. According to the annual report of Office of the Controller General of Patents, designs, trademarks and geographical indications, the R&D institute of Samsung has registered a maximum number of patent applications in the IT sector in 2015-16. While IBM inventors from India receive 800 patents, KPIT filed 58 patents, Out of this, 25 patents are for automotive engineering solutions which are specialized by this firm. MSC software is also a world leader in helping product manufacturers to advance their engineering methods with simulation software and services. US patent was granted to the products of MSC software. Plantronics India receives three patents on new Ribbon copies for RFID. This firm is an IT services and business solution provider. This is a leading Automatic Identification and Data Collection (AIDC) provider in India. It is further observed that a relatively large number of

private players in the Drugs and Pharma industry managed to secure several patents during the post-IPR regime as compared to 1976-2007. On the other hand, the share of patents secured by CSIR has declined during 2011-2015 as compared to 1976 to 2007 though CSIR still controls a major share of patents granted. Most of the top 25 patent assignees such as Cipla, Cadila Healthcare, Mylan Laboratories, etc did not have a single patent to their credit up to 2007 (see Appendix 2.4). However, it was observed that only 12.6 percent of the patented products were commercially exploited in the country (Chaudhuri 2014). Working rate of the patents granted was only 5.28 percent per annum during the pre-TRIPS regime which has increased to 16.91 percent per annum during the post TRIPS regime (Mani 2018). Thus the evidence-based on our analysis indicates that industries are trying to innovate more as part of competition strategy or use patented products to make monopoly profit which was facilitated by the new institutional mechanism such as TRIPs. An attempt has been further made to understand the technological activities of our sample industries in terms of input measures which will be discussed in the following section.

Section 2.2: Technological Activities in Terms of Input Measures

From the previous section, it is clear that firms across industries are making an effort to obtain different forms of IP assets such as Patents, Trademarks, and Designs, especially during the post-IPR regime. An attempt has been made in this section to analyze the technological activities of IP asset-intensive industries by using input measures. Input is generally measured in terms of R&D intensity and the Import of Technology (Embodied & Disembodied) (Smeets, 2008; Mallik, 2014; Khachoo et. al, 2018). The R&D expenditure is generally the initial measurement tool utilized for technology development. It has been perceived that R&D is not only a fundamental engine for productivity growth of the firm

(Griliches, 1979; Malik, 2014) but also a probable source of technological change. Various studies (Kathuria, 2010; Malik, 2014) have used R&D intensity (i.e. total expenditure on R&D to total sales turnover of the firm) as a variable explaining the firm's productivity and they found R&D intensity as an important indicator for any firm's technical or innovative efficiency. Import of technology (Embodied & Disembodied) is one of the most vital sources of knowledge requirement by enterprises in developing economies (Aggarwal, 2002). It consists of both embodied as well as disembodied technology. Embodied technology is acquired through a firm's expenditure on the import of capital goods. Disembodied technology import is calculated by royalty payments (Ray, 2001). Technology import intensity controls for how the expenses on technology imports influence productivity as well as the technological activity of the domestic firms (Malik, 2014). Accordingly, we have worked out various ratios to capture the technological activities of selected IP intensive industries such as Drugs and Pharma (21), Computer and electronics (26) Software (62) and Telecommunications (61). The R&D intensity (R&DI) is derived by dividing R&D expenditure with their corresponding sales. The import of embodied intensity (IETI) and import of disembodied technology intensity (IDTI) for all four industries have been calculated by dividing with their respective sales. Marketing intensity (MI) is calculated by dividing sales with the distribution and advertising expenditure. The intensity of wage compensation (CNS) is measured by dividing sales with the compensation to employees. The data for those variables have been extracted at the firm level from PROWESS data base and aggregated to derive the corresponding industry statistics for the period 1990 to 2018. Thus it is observed that most of the technology activities related variables have shown an improvement in all three industries except Telecommunications during post-IPR regime (2006-2018) as compared to the earlier phase (1990 to 2005) (Table 7.3). For instance, R&D intensity of Drugs & Pharma (21) has increased quite significantly since 2000. It was only 0.002 during 1990 which has increased to

0.007 during 2000 and further increased to 0.03 in 2018. In the case of Computer&Electronics industry, the intensity of R&D expenditure was only 0.001 during 1990 which has increased to 0.004 during 2000 and that has further increased to 0.01 during 2018. The R&D intensity of Software industry during 1990 was 0.0003 and that has increased to 0.4 during 2000 which has further increased to the peak level of 7.2 during 2007. However, the average ratio of R&D intensity of this industry during 2006 to 2018 is 2.6 which is much higher than the rest of the industries. The similar pattern is observed in the case of intensity of embodied technology of these industries. However the intensity of disembodied technology has declined during the post_TRIPs regime in all industries except for software. The average ratio of disembodied technology for the period is 0.046 which has increased significantly to the level of 0.504.

Table 15.3 Industry-wise Distribution of Technological Activities

	Industry	Period	R&DI	IETI	IDTI	MI	CNS
1	Drugs& Pharma	1990-2005	0.021	0.009	0.001	0.084	0.098
		2006-2018	0.065	0.016	0.000	0.089	0.117
1	Telecomm unications	1990-2005	0.173	46.235	0.247	25.34	0.058
		2006-2018	0.025	31.779	0.046	10.057	0.054
2	Software	1990-2005	0.041	0.160	0.046	0.18	0.203
		2006-2018	2.606	3.729	0.504	1.73	0.472
6	Computer & Electronics	1990-2005	0.010	0.024	0.004	0.027	0.089
		2006-2018	0.016	0.010	0.004	0.219	0.080

Source: Compiled by authors by extracting data on January 2019 from PROWESS data base;

The leading firms in terms of securing more patents, trademarks and designs did spend more expenditure on R&D activities. Interestingly, the leading firms in the pharmaceutical industry did spend relatively more on marketing especially after the implementation of TRIPs (Beena and Rabiya, 2019). Further, the study noticed that the compensation to sales has increased in all three industries during the second phase as compared to the pre-TRIPS regime. From this, we can infer that IP intensive industries are spending more expenditure on skill formation while striving for securing more IP assets such as patents, trademarks, and designs (Table 7.3).

From the above analysis, it could be argued that there is an association with the surge in IP Assets in technology intensive industries and expenditure on technological, marketing activities and skill formation. Such association between input and output measures have also been noticed in the case of leading firms in the corresponding industries. The role of such surge in IP Assets on the market structure, profit margin and the development implications of the respective industries is discussed in the following section. This section would also analyze the developmental implications of the TRIPs regime by measuring selected economic performance indicators.

Section 3: Structure and Performance of IP Intensive Industries

Although the ultimate objective of competition and intellectual property policy should be to raise social welfare by promoting the supply of new and existing products and services at low prices (Encaoua and Hollander 2002), many would argue that IPR regime raises rather than reduces barriers (Amann and Cantwell 2012, p.6). Ray and Saha (2011) argued that IPR law might not act as a magic formula to meet the targeted objectives set for rejuvenating India's public-funded research and encourage greater industry applications. An attempt has been made in this section to analyze whether the surge in IP Assets across these industries has led to any change in their market

structure or created condition for appropriating monopoly profit. What is the impact of such market structure on the pricing pattern? Is there any abuse of dominance practiced by firms in these industries? This section tried to capture the impact of IP assets on the market structure and monopoly profit by looking at the size distribution in terms of sales and profitability (i.e, price-cost margin). We have tried to analyze the impact of IP assets on the pricing in the context of Drugs and Pharma purely based on available study. The analysis is further extended to capture the development implications by measuring the growth of sales, value-added, employment, export intensity, import intensity and the ratio of foreign exchange spending to foreign exchange earnings.

Section 3.1: Size Distribution and Profit Margin of IP Asset Intensive Industries

An analysis on the association of surge in IP Assets and its impact on market competition and profit margin across four IP Asset intensive industries and the leading firms is analysed here. The market competition is measured by analysing the size distribution of the firms in our sample industries in terms of sales. We have compiled information related to sales and the number of firms in the respective industries from the PROWESS database. Although the database listed the name of many more firms, we had to restrict our analysis based on sub-sample as the data on sales for many firms are missing. Thus from Table 7.4, it is observed that more than 80 percent of sales are controlled by very few firms in the Computer and Electronics industry while a large number of small-sized firms accounted for less than 1 percent of total sales. Such skewed distribution is more intensive in the case of Drugs&Pharma, Software and Telecommunications industries (Table 7.4).

Table 7.4 Sales Distribution across Selected IP Intensive Industries

	Computer and Electronics		Drugs & Pharma		Telecommunications		Software	
Sales	No of Firms	% of sales to Total	No of Firms	% of sales to Total	No of Firms	% of sales to Total	No of Firms	% of sales to Total
<250 Million	84	0.54	43	0.23	9	0.04	24	7.60
250-500 Million	30	1.01	20	0.52	1	0.16	1	1.34
500-1000 Million	24	1.52	21	1.08		0.00		0.00
1000-5000 Million	63	13.13	56	9.78	3	4.05		0.00
5000-10000 Million	6	4.15	9	3.69		0.00		0.00
>10000 Million	14	79.66	33	84.70	2	95.74	1	91.05
Sample firms	221	100.00	182	100.00	15	100.00	26	100.00
Total firms	561		541		422		1227	

Source: Compiled by authors by extracting data on January 2019 from PROWESS data base.

Further our analysis reveals that the top five firms control almost two-thirds of the total market in the Computer and Electronics industry while the same share for Software industry was 70 per cent (Beena and Rabiyyath 2019). In the case of Telecommunications industry, two top firms such as Indus Towers and Bharti Infratel control 97 percent of total sales (PROWESS data base, 2019). Similarly, the top ten firms control almost 50 percent of total sales and Lupin, Aurobinda, Dr. Reddy, Cipla, Glenmark, Sun Pharma, and Intas are some of these leading firms (See Beena and Rabiyyath, 2019 for more details).

Table 7.5 Performance of Selected IP Intensive Industries

NIC Code	Industry	Period	Profit Margin	Export Intensity	Import Intensity	FES/FEE
21	Drugs& Pharma	1990-2005	0.078	0.186	0.152	0.881
		2006-2018	0.150	0.389	0.219	0.473
61	Telecommunications	1990-2005	-18.508	0.909	59.050	19.241
		2006-2018	5.156	0.038	40.716	3.767
62	Software	1990-2005	1.108	0.242	2.410	0.676
		2006-2018	86.802	3.131	143.318	0.387
26	Computer and electronics	1990-2005	0.024	0.072	0.219	3.188
		2006-2018	0.042	0.124	0.455	2.891

Source: Compiled by authors by extracting data on January 2019 from PROWESS data base;

Profit margin = Profit after tax/net sales; Export Intensity=Export/Sales; Import Intensity=Import/Sales; FES/FEE= Foreign Exchange spending/Foreign exchange earnings.

From Table 7.5, it is evident that IP Asset intensive industries are relatively gaining better monopoly profit during the post-IPR regime as compared to the earlier phase. Analysis of profitability ratio indicates that IP assets creating firms in the Drugs and Pharmaceutical industry makes relatively better profit margin as compared to their industrial average. For instance, Samsung India Electronics which is a leader in this industry and also specializes in the mobile phone makes a huge profit margin as compared to their industry average/ counterparts. Intex technology Ltd, which ranked the second position in the computer and electronics industry, has also recorded higher profit margin though their profit has declined in recent years. Similarly, in the case of the Telecommunications industry, Indus Towers and Bharti Infratel were making a huge profit margin while the industry as a whole has registered a huge negative profit margin. Our exploratory analysis further indicates that some firms such as Tata, Reliance Telecom, etc

are making huge losses and that was accounted for the losses of this industry. The profit margin is positive and much higher for the Software industry as compared to other industries. KPIT which has registered a relatively large number of patents do make a good profit margin as compared to Batronics India Ltd which is a leading firm in terms of sales in this industry. MSC Software and Virtual Galaxy are also making a profit margin consistently. Similarly, in the case of the Drugs formulation industry, the leading firms which are also known for having a large number of patents do make a huge profit margin as compared to the industrial average (see Table 5 and Beena and Rabiyyath, 2019).

Section 3.2: Performance of Development Indicators of IP Asset Intensive Industries

An attempt has been made in this section to analyse the implications of such technological activities as far as the development is concerned. We have considered variables such as growth of employment, outsourced jobs, sales, value added and balance of payment indicators such as exports and imports. Thus from Table 7.5, it is noticed that Drugs & Pharmaceutical and Software industries exports more as compared to the other two industries. Foreign exchange spending is much higher due to the large intensity of imports. This scenario has even worsened during the post-IPR regime (Table 15.5). However, the ratio of foreign exchange spending to foreign exchange earnings for Drugs & Pharma and Software industries are much better than the rest of the industries. From Table 6, it is quite clear that the growth rate of sales of all industries except Software has declined during the post TRIPS regime as compared to the earlier phase. Based on ASI data base, it is evident that the growth of employment, value-added and output of all four industries has shown consistent declining trend during the post-TRIPS regime while the growth of employment of Drugs&Pharma and Communications did show a marginal improvement (ASI data base). However, our observations do not

provide enough evidence to prove that product innovations are employment creating while the process innovations are employment destroying as observed by Edquist et al., (2001).

Table 7.6 Performance of selected IP Intensive Industries

NIC Code	Industry	Period	GR of employment	% Labour cost	% on the outsourced job to total sales	GR of Value Added	GR of Sales
21	Drugs & Pharma	1990-2005	0.112	0.092	0.004	0.339	0.111
		2006-2018	0.146	0.120	0.010	0.085	0.082
61	Telecommunications	1990-2005	0.396	0.044	0.085	0.890	3.761
		2006-2018	0.400	0.050	0.014	0.152	2.005
62	Software	1990-2005	1.825	0.220	0.034	0.539	0.117
		2006-2018	0.132	0.528	0.139	0.171	0.748
26	Computer and Electronics	1990-2005	0.076	0.080	0.001	0.278	0.121
		2006-2018	-0.017	0.070	0.003	0.088	0.061

Source: Compiled by authors by extracting data on January 2019 from PROWESS data base.

Further, the study noticed that the expenditure spent on the outsourced job has increased during the study period across the industries as part of cutting down the cost of production. It is also noticed that leading firms in these industries are also engaged in international production activities (Beena 2018).

Thus the study observed that the IP asset-intensive industries and the leading firms in those respective industries are gaining higher monopoly profit. Further the study noted that Drugs & Pharmaceutical industry and the Software industry did spend relatively more on R&D expenditure, skill formation. These industries were also doing well in terms of patenting which is an output measure of technological activities. Profit

margin and other development indicators of Drugs and Pharmaceutical industry did perform well as compared to the other IP intensive industries during the post-IPR regime. However, the impact of such positive trend did not get reflected on the pricing pattern in this industry. A recent study on market structure and pricing based on a representative sample of 135 molecules (Choudury 2018) observed that newly patented products accounted for almost two-thirds of the total sales of monopoly products and the rest of the sales were not patented. Moreover, those patented products are dominated by MNCs. Therefore, it is argued that MNCs are going to dominate the market and generic companies might not be willing or able to enter the market due to new forms of regulatory barriers (Choudury, 2019). It was argued that many people die each year in developing countries due to lack of access to effective and affordable medicines (TWN, 2005). This was resulted due to the implementation of TRIPs and elimination of competition from generic goods which would allow manufacturers of branded drugs to increase the prices of their products. The present study could not analyse the impact of market structure on the behaviour for rest of the industries although it is extremely important.

Section 4: Conclusion

India has made TRIPS compliance in 2005, where the product patent for the pharmaceuticals, agrochemicals and food industry was brought back. The study reveals that the number of IP Assets (i.e., Patents, Trademarks and Designs) received by Indian industries have increased especially during the post-IPR regime. While Capital goods or Technology-intensive industries are found to be more patent intensive industries, Consumer goods and service oriented industries are found to be more trademark and Design intensive industries which is quite consistent with the observations made by the earlier studies (Greenhalg et.al, 2001). Although the overall number of patents has increased in India especially during the post-IPR regime, most of these patents are secured by foreign firms located in

India while Indian firms control larger share of trademarks and Design applications. The study further observed that a relatively large number of private players in the Drug and Pharma industry managed to secure several patents during the post-IPR regime as compared to 1976-2007 while CSIR still controls the major share of patents granted in India.

The study validates the positive association between the trademark applications and several other innovation indicators such as Patents, R&D or new products launched as it reveals that IP Asset intensive industries are spending more on technological, skill formation and marketing activities. It is further observed that a major share of the market is controlled by few firms across all sample industries. Firm-level analysis on R&D expenditure, Marketing expenditure and the number of patents reveals that the leading firms in the respective industry are active in securing more IP assets such as patents and also do spend relatively more on R&D and marketing activities as compared to their industry average.

The study further argues that the IP asset-intensive industries and the leading firms in those respective industries are gaining higher monopoly profit inspite of showing poor growth performance in terms of output, value added and employment during the post-IPR regime. Further the study could not find enough evidence to prove that product patent regime can generate more employment as suggested by Edquist et al (2001).. The evidence based on the impact of IP Asset creation on the market structure, pricing and abuse of dominance in the case of Drugs and Pharmaceutical industry in India indicates a discouraging trend (refer also Choudhuri 2018; 2019; TWN, 2005). Finally, the paper argues that the legal and extralegal institutions are a precursor of having economic production and exchange. For instance, the role of technological activities to make a firm or industry competitive in the market environment is by and large an institutionally guarded process.

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Youth Entrepreneurship in Kerala: Problems and Prospects

Vijayasree RM

Reducing youth unemployment is one of the major challenges for years to come (Delgado, 2004). In July 2016, there were 20.5 million unemployed in the United States alone; complementing the statistics that a third of world's 1.8 billion youth being currently in job search pursuit (ILO, 2014). This would further imply that the global youth unemployment rate to be around 13.1 per cent. Also, global labour force participation rates for young people decreased by almost 4 per cent points as a whole between 1993 and 2003, mainly as the result of an increasing number of young people attending school, staying longer in education and diversified personal and career choices. These facts lay out a broader perspective of global employment scene. Thus, ignoring the youth unemployment imposes not only widespread social discontent, but also bears tremendous economic costs. Youth unemployment is an immense waste of human resources and if tapped efficiently could contribute to economic and social progress. Also, an increase in youth unemployment would have a negative multiplier effect. The ILO estimates that halving youth unemployment from the present 14.4 per cent to 7.2 per cent would add 4.4 per cent to 7 per cent to global Gross Domestic Product (GDP). The direct economic gains of such a policy outcome to the society would be matched by a reduction in expenditure to counter risky behavior as well as social benefits in terms of reduced vulnerability and exclusion. Decent work can also shift young people from social dependence to self sufficiency and helps

them escape poverty. A far-reaching impact of such a visible reduction in unemployment would be in imparting young people a sense of meaning and belonging which adds to their internal potency.

Entrepreneurship as an Opportunity

Within the framework of potential strategies to augment employment avenues for young people, entrepreneurship is increasingly accepted as an important alternative. As traditional career paths become scarce, entrepreneurship may be regarded as an additional way of effectively integrating youth into the labour market. Increased popping up of small enterprises, more as self employment options are a supporting observation to this shift in paradigm. Given global demographic trends, it is important that the social and economic contributions of young entrepreneurs are recognised. Entrepreneurship can unleash the economic potential of young people. A number of reasons may be put forth for promoting youth entrepreneurship (Chigunta , 2002). They are:

- i. Entrepreneurship creates employment opportunities for self-employed youth as well as the other young people they may employ.
- ii. Brings the alienated and marginalized youth back into the economic mainstream.
- iii. Helps addressing some of the socio- psychological problems and delinquencies that arise from joblessness.
- iv. Helping youth develop new skills and experiences that can be applied to other challenges in life.
- v. Promotes innovation and resilience among youth.
- vi. Promotes the revitalization of the local community by providing valuable goods and services.

For developing countries, entrepreneurship and self-employment can be a source of new opportunities. Developed countries shall view entrepreneurship as a mode to economic dynamism. For young people in the informal economy, micro-entrepreneurism is a bottom- up method for generating income.

However, entrepreneurship is a seed that needs intense nurture. It requires appropriate economic conditions and elevated consumer spending pattern, which attributes an element of uncertainty to outcomes of entrepreneurship. Thus, most policies of present day offer a well administered framework for promulgating youth entrepreneurship and the arena itself has been recognized as an avenue of opportunity, both by the Academicians and prospective innovative brains.

Different perspectives have been developed on the concept of entrepreneurship on academic front. Some hold the view that psychological drives for monetary gains are present in all societies which form the prime reason for enterprising skills (Flavia, 1971). Some scholars explain entrepreneurship in the context of a broad political economy paradigm, while others depict entrepreneurial supply as a function of cultural values, role expectations, and social sanctions (Cohran, 1965). Literature on entrepreneurship is limited when it comes to the Indian (or Kerala specific) case, wherein a majority of studies focus either on evolutionary trajectory of entrepreneurship (Tripathi, 1985) in the country or the community specific features of it (Guha, 1984; Nath, 2000; Ray and Ramachandran, 1996). Existing studies become further narrower when it comes to specific entrepreneurial initiatives of youth – one of the most vulnerable groups in policy lens. There is an observed monotonicity in the existing body of literature that either focus on creating a data base on the socio-economic features of young entrepreneurs (Venkateswaran, 1990; Raman, 2003)) or a detailing an evaluation of policy interventions (Awasthi and Sebastian, 1996). It is in this context the present study stands out trying to picture a detailed evaluation of the potential reasons and challenges that young Keralites face in their entrepreneurial pursuits, particularly in a heterodox context. It is expected to follow neo-institutional tradition, viewing Government as an institution leading entrepreneurial behavior, its prime motives and challenges.

Neoclassical Youth Entrepreneur

Neoclassical notion of entrepreneurship as a source of capital accumulation and firm as a typical black box has been reigning academic literature for long. Its supremacy is in the fact that neoclassical paradigm is largely concerned with theoretical model building using stable and quantifiable variables which henceforth can be put to empirical testing. This is also the profound weakness implied. The neoclassical dimensions are far way different from entrepreneurs in flesh and blood. (Hence neoclassical theorizing has behavioural aspects least addressed to.)

The recent emergence of alternative thinking in particular has pointed out that, the neoclassical entrepreneur presents an unrealistic and partial conception of the firm and entrepreneur. This happens for two reasons. Firstly, neoclassical firm is not analyzed as an organization. It is defined as a collection of individuals who work in the same place, but not together. Without being an organization, an entrepreneurial venture cannot yield collective goals. Secondly, the Neoclassical entrepreneur is unable to address “the issue of entrepreneurship owing to its epistemological standpoint.”

An overarching weakness of the neoclassical way of thinking is that the production context is not understood as a hierarchical phenomenon of thinking but as another price relation, wherein each bilateral relationship is explained with the help of parameters like wages, profits and technology. This rationale can be well attributed to the historical progress of neoclassical regime, characterized by industrial growth, capital accumulation and lengthy diffusion of innovations.

Now circumstances have changed. With alternative dimensions emerging, the ingenuity of business man has been replaced by the rationality of a manager and synergy of the company and its units as a comprehensive whole. But an exhaustive analysis in alternative grounds is still unavailable, probably adding to the life of neoclassical doctrine.

Objectives of the Study

1. To identify various motivational factors behind youth entrepreneurial ventures.
2. To recognize challenging factors faced by a youth entrepreneur in undertaking the venture.

Methodology

The present study uses primary data in particular, the nature of study being an intense case study. However, in several contexts, especially with regard to policy references and statistics, secondary data were used. Primary data were mainly collected from - Pure profit enterprises, Cooperative units and Entrepreneurial ventures.

Regarding the pure profit enterprises, sample was drawn from 25 entrepreneurs in the study area of Thiruvananthapuram district. The district having the advantage of being the capital city is observed to have many such budding initiatives, especially micro and small-scale units flourished during the recent decade. Initially, the list of micro, small or medium enterprises run by youth falling to an age of below 40 years was collected from District Industries Centre (DIC) for over a period from 2007-2012 (The period 2007-2012 was set as a benchmark as the study units were expected to have a vintage of at least 3 years). However, the list not being updated regularly contained names of units which stopped functioning and even those which did not take off. Thus, the list was found to be partially reliable. Further the study was oriented as a case study of 25 sample entrepreneurs carefully filtered. An interview schedule was then prepared and structured personal interviews were followed. This helped in obtaining results that are representative and having the ability to be generalized. For open ended questions, an unstructured interview schedule tactic was used incorporating flexible questions so as to incorporate the views and pinching concerns of the respondents.

As regards with cooperatives, only five units had a youth entrepreneurship dimension. Of these, three were community owned and the rest by workers; including Kudumbashree run ones [Kudumbashree -prosperity (Sree) of the family (Kudumbam)]. Here a group interview technique was employed with direct participation from the researcher wherein, the members of the cooperative were allowed to interact with each other discussing various dimensions of the research question.

Corporate entrepreneurship being a very novel initiative, only one relevant unit was studied. Data from this single entrepreneurial unit was collected through telephonic interview following an unstructured interview schedule. The so collected data is presented in a descriptive way and is less analytical. The present study shall draw conclusions on the basis of wider socio-economic contexts.

Profile of Entrepreneurs and Enterprises

The profile has been framed on the basis of data collected through a structured interview schedule among 25 young entrepreneurs. It covers explicitly the social, economic background of the sample and implicitly various factors like education, marital status etc. It is likely that these factors have influenced the setting up of their enterprises. The characteristics of women entrepreneurs in the sample also have been examined to determine whether there were any noteworthy particularities in their background, which have influenced their entry in the first place, and their entrepreneurial performance later on.

As many as 15 sample entrepreneurs are presently aged 35 years or above. In this, more than half of them started their first venture at late 20s or early 30s. This reveals that the entry to entrepreneurial ventures happened during a late youth period for majority of samples. Although these results are specific to the sample selected, it is found to agree with the findings of some of the earlier studies which suggests that the entry into

entrepreneurship in Kerala is likely to be in the early thirties (Venkiteshwaran (1990).

- i. For most of the entrepreneurs, the present venture is their first one. But about 12 per cent had started ventures or had been partners in other initiatives prior to starting the present one.
- ii. Majority of the entrepreneurs manages a single firm. Only 8 per cent were found to manage more than one firm.
- iii. Almost all entrepreneurs except a few had a business background. 2 Entrepreneurs in the sample were first generation entrepreneurs who were new to the field, but had enough work experience earned before starting the venture.
- iv. An interesting gender dimension was found among the respondents. Unlike most of the studies pointing out women's presence to be limited in the field of entrepreneurship, the present study group includes a women population of 22 samples and finds out youth entrepreneurship in the district to be women dominated terrain. Gender specificities were found to have a profound influence on the selection of enterprise. Women concentrate more on food products and ready-made garments industries. Nevertheless, these women run business units were found to have a better innovation strategy compared to that of entrepreneurial ventures initiated by men.
- v. Most of these women entrepreneurs were having a business background, with their family members and relatives running shops, enterprises or the similar kind. Almost all the women entrepreneurs expressed their passion for the work as a key determinant in entering entrepreneurial ventures. Most of the samples started their venture at an age of early 30s wherein the initiation was on a limited scale but are found to be growing in self-confidence over time.

Profile of Enterprise

Of the 25 units surveyed, 20 units were having a vintage of 3 to 5 years. The major type of enterprises covered in the study were clothing, food and grocery, engineering and electrical units.

- i. Of this, clothing sector had the largest number of respondents, which is a booming sector in the state. This reveals that all the young entrepreneurs were exploiting the current market trend. Even in the food and grocery sector, a majority of samples were orienting their business on leading trend as in decorative cakes and confectionaries, rather than traditional food processing units.
- ii. The investments in all the sectors were primarily raised through private assets and later on for business expansion, bank credits were relied upon.
- iii. The selection of the type of enterprise to be started is one of the crucial decisions before initiation. While examining the factors, having influenced the selection of the enterprise, it was found that work experience the entrepreneur has and experience in the same or related areas were found to be significant.
- iv. Nearly all entrepreneurs reported that their parents or relatives were employed or engaged in business in areas related to the business of the respondent. Thus, the entrepreneurial ventures never seemed new to them.

Cooperatives

For the present study, data were collected from five cooperative units. In this, two units were 'Kudumbashree' run, and the remaining three were owned by communities. A serious limitation in sampling was that the sample cooperatives were mainly women centered ones. The major products of the sample units studied are summarized in Table 8.1.

Table 8.1 Major Products Produced and Sold

Products	No: of units
Candles	3
Umbrella assembling	3
Pickles	3
Confectionery item	3
Bakery products	3
Catering	2

Source: Sample survey, 2016

Here there are samples wherein a single cooperative produces multiple products. For instance, units producing confectioneries also produces pickle and bakery products. Data were collected through group interview technique, wherein the members sat in groups and discussed various questions raised.

Corporate Entrepreneurs

A corporate entrepreneur or an intrapreneur is an employee who is given the authority and support to create a new product without having to be concerned about whether or not the product will actually become a source of revenue for the company. Only a single intrapreneurial venture was able to be covered in the study, which is a prominent online grocery store in the district.

Summing up, it is expected that an understanding of the profile of the entrepreneurs may help in gaining insights into the making of the entrepreneurs. It appears that the entrepreneurs in the study area are highly educated; however, they lack comprehensive exposure in the field. Most of them are first generation entrepreneurs. Nevertheless, most of them hail from families having business exposure. Their success or failure seems to be more of an offshoot of individual talents, which as the results indicate is not necessarily shaped by the

entrepreneur's economic, personal, social and educational background. These factors shape the basic motivations behind entrepreneurial ventures.

Motivational Factors for the Establishment of a Venture

What factors determine the setting up and establishment of a venture? This has been the pivotal contradiction between Neo-Classicals and the schools falling on the alternative paradigm. The traditional school bases its ideal firm on marginalist principles, wherein not many of their assumptions have a profound acceptance in its rational sense. The present study is a short run analysis among firms having a vintage of at least three years and is invalid to the traditional long run notions (The target group being young entrepreneurs). Accordingly, several motivational factors were identified out of literature review and observation which were presented to the different categories of respondents. The responses may be summarized as follows.

Pure Profit Enterprises

Motivational factors behind initiating a pure profit enterprise were categorized on the basis of a classification adopted in a research proposal by Centre for Development Studies (CDS), 2003. The various factors motivating a young entrepreneur so identified are:

- (i) Compelling factors
- (ii) Facilitating factors
- (iii) Opportunity factors

To identify the intensity of motivation, the *prima facie* noted factors both following the traditional doctrine and others were spelt out on a four-point Likert scale. The interview was hence structured in such a way as to allow respondents to rate their preferences from strong disagreement to strong agreement

wherein strong agreement shows most motivating factor. Such a method was used here as it is likely that entrepreneurs are motivated by different factors simultaneously.

Compelling Factors

Sometimes, it is external compulsion or compulsion from within that push people to launch a venture by themselves. In Kerala especially where the number of educated unemployed youth is high, people are compelled to seek for self-employment options. An external stimulant in the form of financial support or support on non financial ground can accelerate the pace of commencement of new ventures here in the district. Similarly, the urge for following one's own passion has significant influence in the dawn of entrepreneurial ventures by young entrepreneurs. This is treated as a form of compulsion from within. Table 8.2 presents the details regarding the major compelling factors, which have affected the study samples.

Table 8.2 Compelling Factors Motivating Entrepreneurs

Factors	Average Score	Percentage of Firms			
		4	3	2	1
Dissatisfaction with previous job	1.24	0	12	8	80
Desire to earn profit	3.12	79	10	7	4
Fear of unemployment	1.04	0	0	88	12
Passion for the work	3.56	87	11	2	0
Desire to be one's own boss	3.72	88	12	0	0
For achieving higher social status	2.8	0	80	20	0

Source: Sample survey, 2016

It is here clear that profit is no longer the single important determinant behind initiating an enterprise especially for youth. Rather the desire to be one's boss or to be self employed has the highest average score. About 88 per cent of

the respondents had a strong agreement to self employment as a prime motive in initiating the units. Another trend among the sample studied is that, most of them started the ventures out of the passion for their work. Particularly this behavior was seen among women entrepreneurs with satisfactory financial backgrounds. Fear of unemployment was observed to have the least ranking. “So long as passion for work and sustained efforts is there, employment opportunities will automatically be generated”, says a young entrepreneur.

However, the role of profits in business activities should not be undermined. It still holds an important place in activities of a firm. But profit becomes the major concern for units, only after they establish themselves in the market amassing a group of faithful customers. At first this aspect to get established overpowers profit motive.

Facilitating Factors

The factors facilitating entrepreneurship include- the encouragement and support from members of the family, friends or relatives both material and moral, the experience gained from previous employment, a good educational background, the skills acquired etc. The possibility of using idle funds and the easiness in entering a particular line of business were identified to be other major facilitating factors. The influence of various, facilitating factors in motivating an entrepreneur is summarized in Table 8.3.

Table 8.3 Facilitating Factors Motivating Entrepreneurs

Factors	Average Score
Influence of friends and family	3.84
Previous experience in the same line	2.92
Previous assets	3.12

Source: Sample survey, 2016

The influence of friends and family has the highest facilitating impact. Moral support from one’s close relations

and friends boosts up morale, recharges self-confidence, stimulates enterprise, and strengthens people to face the challenges, especially those that arise in the initial years. Regarding the entrepreneur's financing pattern, a majority of them had assets in the form of inherited property and fund, which made them less rely on bank credits. These entrepreneurs mainly used the bank credit for business expansions rather than initiating the venture. Their pattern of loan structure reveals that, all of them started their businesses with less investment rather than pooling in a significantly large amount. This pattern they believe to be an insurance against the market uncertainties. Three out of the total respondents had work experiences in the same line. Others possessed a firm business background. This indicates that previous experience is particularly useful when it comes to the marketing stage of a particular product as it requires expertise in the field.

Opportunity Factors

The opportunity factors are those which emanate positive externalities. These factors create significant robust to the growth of a firm. The opportunity factors that the present study identifies are technological advancements and opportunities in marketing. This includes initiating the venture in the trend sector.

Table 8.4 Opportunity Factors Motivating Entrepreneurs

Factors	Average Score
Technological advancements	2.84
Opportunities in market	3.96

Source: Sample survey, 2016

The study identifies that, better marketing opportunities are essential for every enterprise to grow, nurture itself and develop a concrete customer confidence. However, youth run enterprises having a vintage of less than three years face difficulties in accessing those marketing opportunities as they

have less exposure to credibility concerns. These are the various motivating factors behind the initiation of a pure profit enterprise, wherein firm has a multiplicity of goals and factors motivating them. Of these, passion for work seems to be the most striking one.

Cooperative Ventures

The motivating factors behind the setting up of a cooperative are different from that of a pure profit enterprise. This is mainly because; the cooperatives are initiated by a unique class of people, with entrepreneurial aptitude. Cooperatives offer many possibilities in the entrepreneurial sector, especially for people who are economically weak. Co-operation imparts valuable schooling in democracy where even the poorest and newest members enjoy equal rights. Following observations were made regarding the motivational factors behind the initiation of cooperative ventures.

Financial Stability

- i. Units especially Kudumbashree ventures, having achieved greater credibility across years, receive big contracts often which are a key motivation.
- ii. Cooperatives along with being a production unit also function as agency providing small scale finances to its members.

Infrastructure

- i. The community owned cooperatives have the advantage of the basic infrastructure like land and buildings being offered by their respective community authorities. This covers their initial investment expenditure.
- ii. Cooperatives have the advantage of advertising their products through exhibitions, trade fairs etc. These trade fairs are also probable marketing outlets.

Empowerment

- i. Every single member enjoys decision making power in a cooperative, which is a source of empowerment.
- ii. Government finances and support programmes do motivate the cooperatives to a large extent. Some of the major schemes and policies that the units themselves found to be relevant include, Government participation in the share capital through the District Industries Centers, Reimbursement of advertisement expenses, Other financial assistance on advertising through cinema slides, trade fairs, radio broad casts etc. and Government run trade fairs, exhibitions etc. which intensify the credibility.

Experience

Previous experience similar to that of pure profit enterprises is an important motivation here also, as experience in the same line is essential especially for marketing and advertising of products. All sample units had members having previous experience in entrepreneurial activities, either directly or indirectly.

Corporate Entrepreneurs

Another class of entrepreneurs studied is corporate entrepreneurs or intrapreneurs, of which a single online grocery firm was found to have the proposed characteristics. The various motivational factors identified shall be described as below. The innovation and novelty of the concept of online grocery was itself found to be a key motivating factor. Moreover, the market feasibility of the venture was assessed to be positive. While the venture was initiated, the concept itself was new to the customer class. Hence the prime concern was in earning their confidence. It took the firm more than a year to start making Rs three to four lakh per month. Till date, they have invested around Rs 1.25 crore and get revenue of Rs 15

lakh per month. They currently get 2,200-2,500 orders per month.

The firm operates on a combination of its own inventory for fast-moving products, as well as partnerships with retailers in the city. The company also provides same-day delivery to offices or houses, depending on the customers' convenience. All this attributes to the fact that profit similar to the other enterprises no longer seems to be the sole advent. Rather it is secondary yet an ultimate goal.

Again, it was observed that the firm's strategy was to establish a market in the district by focusing primarily on Tier ii and Tier iii cities since these cities require lesser investment and personnel. This shows the strategic move of gradualism. Innovations account to be another motivation for sustenance. The firm studied has its own unique features which may not induce at profit at one stretch. These may seem to be more of an experimental nature. From the nature of the firms being analyzed, following common motivations shall be observed, which attribute to behavioral aspect of firms including Innovations, increasing credibility and differentiated cost pattern.

The analysis so far describes the various motivations behind the initiation and establishment of an enterprise. But in real contexts, several challenges overshadow the prospects which need to be ideally examined.

Challenging Factors

Along with analyzing the key motivations, it is also important to shed lights on the challenges that the modern enterprise face. As per the World Bank Report, 2011; the major difficulties in establishing a business venture were identified as difficulties in access to finance (especially for start-up firms), deficient experience and absence of special Government program in support of entrepreneurship and innovation. The present study broadly classifies the major challenges faced by

young entrepreneurs in Thiruvananthapuram district on the following lines - availability of finance and factors, experience and social challenges.

An unstructured interview schedule was followed among pure profit enterprises and corporate entrepreneurs, so as to clearly assess the nature and intensity of various barriers. The questions were framed in such a way as to respect the conclusions of traditional school also. Besides, thoughts and ideas of various alternative schools were also incorporated so as to make the study more precise. The various challenging factors were mentioned on a four-point Likert scale. The respondents were requested to rate the challenges they face from strong disagreement to strong agreement. The key responses are summarized along.

Availability of Finance and Factors

The factors that form hindrances to the entrepreneurial evolution and expansion are primarily in the form of scarcity of finances or lack availability of quality factors required for business. Among these various factors, availability of skilled labor and quality raw materials were given more relevance. However, the different units may face different factor challenges, depending on the nature of firm and field of business play. Table 8.5 presents the details regarding the basic challenges that a young entrepreneur faces on financial and factor grounds.

Table 8.5 Availability of Finance and Factors as a Challenge

Factors	Average Score
Availability of capital	2.84
Skilled labour is scarce	3.88
It is hard to find quality raw materials	2.64
Increased cost of production	3.00

Source: Sample survey, 2016

It is obvious from the analysis that the major constraint faced by youth is in mobilizing skilled labor force. This is particularly relevant in the cases of clothing and Grocery sector, which requires skilled labor force. Another issue in labor mobilization was found among enterprises making use of technology as in enterprises at IT front and similar kind. Although Kerala has a strong base of educated labor force, their employability does seem to be a serious issue. It is worth mentioning about the inadequate educational and non-financial support from the state in improving the employability of youth.

Financial constraints only have a moderate influence over establishing an enterprise. This may be because, a majority of respondents relied on their previous assets for initial investments. They resorted to bank credits only at the expansionary phase. Quality raw materials become a constraint largely for clothing sector wherein raw materials needed to be mobilized with difficulty. The fast-changing trends, tastes and preferences also pose a significant constraint to such ventures.

Experience

Experience, particularly experience in the same business line sharpens the credibility and potential growth of enterprises, which youth entrepreneurs lack. This becomes a serious issue with the 4per cent of respondents falling to an age category below 30 years. The concern of experience was further classified into three basic questions which were then asked to the respondents. The table 8.6 summarizes the responses:

Table 8.6 Experience and other relevant factors being challenges

Factors	Average Score
Existence of established firms	2.84
Lack of experience in the same line	3.16
Credibility issues	1.24

Source: Sample survey, 2016

A potential threat that almost all respondents agreed with was about the existence of established firms. Especially in trend sector like clothing the threat from branded products and retail outlets prevails. For most of the respondents it took time to get themselves established in the market. This was observed to be made possible with quality service delivery and advertising tactics, wherein for small scale enterprises, even word of mouth publicity was found to be crucial. Another major hurdle, that inexperience or lack of experience causes is the time lags in execution of a business innovation. “It takes a lot of time and effort to convert an idea into a prototype, which deteriorates the marketing opportunities for a firm”, says a respondent from social entrepreneurship sector. Regarding credibility issues, majority of entrepreneurs deemed themselves to be quite credible.

Social Challenges

Social challenges in this particular context of study includes cumbersome social environment, psychological factors like fear of failure and lack of Government support. The table below conveys the relevant responses:

Table 8.7 Social Challenges Faced by a Youth Entrepreneur

Factors	Average Score
Fear of failure	1.36
Social environment	3.52

Source: Sample Survey, 2016

Social environment in which the entrepreneur lives offers a major challenge to them. Social environment here includes the influence of friends and family. This was nevertheless an ex-ante challenge which formed a barrier for entry into the particular field. Once established, social environment seems to have a positive impact. Respondents comment that this contradiction is mainly because the Kerala society, being a conservative one, still values the security

offered by paid jobs over risky world of business. The concept of entrepreneurship as a career choice would take time to find its roots in the district. Interestingly only a very few entrepreneurs feared failure. Challenges above mentioned may be further extended to other entrepreneurial categories also.

Cooperative Ventures

Cooperatives in their business pursuit often face many challenges. But they are different in form from that of pure profit enterprises. The effective functioning of a cooperative depends on the structure and composition of enterprises. Only a cooperative with strong leadership and vibrant members can flourish economically. Following a group interview strategy, the members of the five cooperative units studied revealed the potential and actual challenges they foresee as follows:

1. Cooperatives unlike other business units are less flexible. This implies that switching from one business to other requires consensus, even if the current business is incurring a loss.
2. In case of cooperatives offering financial assistance to its member similar to a chit fund system, the cooperative may incur financial losses if members default payments.
3. Lack of adequate fund at disposal for expansion is another challenging factor.
4. In case of community owned cooperatives, the democracy of members being constrained by an external agency, the efficiency is also questioned.
5. Lack of commitment from members was viewed to be a potential challenge. The whole idea of cooperatives revolves around the commitment and accountability of members.
6. Marketability of the products poses another threat.

These are the major challenges cooperative units posed to be threatened.

Corporate Entrepreneurship

The final category of entrepreneurs studied was corporate entrepreneurs. The sample venture is new to district's market and is now a sole dominant player in the field. But the threat from established firms entering the market scene forms the setting. In this background, the basic challenges identified were as follows.

1. For the venture presently studied, novelty of the concept itself was observed to be a hurdle. Compared to other metros, it is difficult to earn the customer confidence of Keralites, especially in a field like online grocery where the targeted customers are used to buying grocery for which tangibility provides a distinct utility.
2. Compared to other Tier- II and Tier-III cities, infrastructure, basically road and other means of transport are not conducive for such an enterprise, whose service delivery largely depends on quick accessibility.
3. Another challenge, observed to be faced was the climate and market space of Thiruvananthapuram. The director of the venture in a secondary source commented that the humid atmosphere particular to the state made their products soggy at delivery initially.
4. Another challenge that corporate entrepreneurs often face is the scarcity of resources. To get the right kind of resources and raw materials often, they had to resort to other states and cities.
5. Lack of awareness among the customers, the service of similar kind being unknown was another major hurdle.

However apart from these challenges, corporate entrepreneurship shall have more potential for development as the investment climate in the district especially in recent decade has flourished. To resolve these challenges, the entrepreneurial system itself is to be mended over. More youth entrepreneurs must have access to growth insights and market potentials; wherein a short-term hand-holding support shall be offered, by Government authorities and venture capital firms. This shall complement the intense mentoring required.

Conclusion

The present study was a brief attempt to reframe neoclassical black box theory of firm with more behavioral aspects and dynamism of youth. It was attempted to be more qualitative in research approach in which a case study method was used which allowed for close observation of responses. The whole paper attempts to identify the various factors motivating young entrepreneurs in initiating a business venture in the district and those which hinders them from expanding their venture. However, a serious limitation of the study is that it covers only few samples along. The conclusions drawn, attributes to several concepts and theories hitherto developed on alternative arena, of which behaviouralist notions of a firm were boldly reflected and traditional school being contradicted.

Firstly, the multiplicity of goals that a firm endures on its establishment is well represented by alternative thinkers and is supported by the present study also. Firms studied here had multiple goals, of which the desire to be self employed and thus earn social dignity was found to be the most important motivation. This factor as a motivation, to an extent shows dynamism of youthfulness. Nevertheless, it is to be admitted that the traditional school was not wrong in pointing out 'profit making' as a prominent goal. However, it is not the sole driving force.

Secondly, the traditional theory initially assumes that in decision making, firm exhibits global rationality. The real business world, however is bound to uncertainties, both that are foreseen and not. The behavior of sample units, where the young entrepreneurs start the venture with less capital invested, and further on expanding as firm progresses, marks the possibility of their expansion path being affected by unforeseen events and occurrences.

Further, uncertainties observed are mainly of two types - Uncertainty arising from changing market conditions and Uncertainty from competitor's behavior. Regarding uncertainties from changing market conditions; taste and preference of consumers, methods of production etc have a profound role. For an enterprise in clothing sector or the similar kind, trend and fashion keeps changing and new firms may find it tedious to get in track with the changing preferences. However, the established firm out of experience and market know-how may more concrete knowledge about the market. The actions of established firms were found to have profound impact. This was more evident in the case of the corporate entrepreneur; wherein online grocery is new to the district and this provides them with more market access. However, they fear established companies entering the market with innovative business models. Also, existing firms were observed to be facing an uncertainty of potential entrants to the field. The issue of uncertainty was found having the least influence among cooperative consortium.

As far as challenging factors are concerned, most challenging factor among all the enterprises is the scarcity of skilled labor and quality infrastructure. Unlike the traditional theory projects, even the smallest enterprise in the unit, was conscious about the established and potential opponents. Marketability of products emerged as a concern solely for cooperatives. For corporate entrepreneurs, the basic challenge is in creating a bunch of loyal customers, which is a herculean task.

In short, strong dynamism has been observed within young entrepreneurs having a multiplicity of goals. For pursuing this on its real account, several challenges were also found to be addressed.

Short term success rates were found to be less self reinforcing as the market is prone to continuous volatility. Thus to be successful over the long run, the young entrepreneurs should invest in surrounding themselves with the right growth coaches to ignites their paths ahead. From the political mechanism, more doors need be open for start ups and other self-employment ventures for youth, locally and outside. This further shall act as a potential agent; regenerating growth waves.

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Transfer of Property Rights on Land, Land Use Changes and Agricultural Production in Kerala

T J Joseph

Agriculture plays a vital role in maintaining livelihood issues on the whole. It is the single largest employer in the world, providing livelihoods for 40 per cent of the population (United Nations Human Rights, 2008). The agricultural sector in Kerala is facing a serious crisis of growth. The area, output and productivity of major crops in Kerala are on a decline since the mid-70s. In 1956, about 53.1 per cent of Kerala's working population was engaged in agriculture and the sector was contributing nearly equivalent per cent the Gross State Domestic Product (GSDP) (Government of Kerala, 2016). By 2013-14, the sector's contribution to GSDP has fallen to 10.88 percent, which is the lowest when compared to any other state in the country. Moreover, the state has observed drastic decrease in agricultural output and area of operational holdings since 1990-91. During 1990-91, the average size of holding was 0.37 hectares and in 2010-11, it was 0.22 hectares, about 40.5 percent decrease in area has occurred. According to a report by Directorate of Agriculture, Government of Kerala (2016), the gross cropped area and net area sown is on continuous decline and the extent of land put to non-agriculture use has been increasing from year to year. This situation has to be viewed seriously since a large proportion of the population in Kerala is rural based and still depends on agriculture for a living. A stable growth of the agriculture sector is, therefore, very

important for providing employment and livelihood for the rural population.

Several studies (see for example Kannan & Pushpangadhan, 1988, 1990; Kannan, 2011) have identified and attributed this declining trend in Kerala's agriculture to various factors. The first and foremost factor is the increasing population and density of population that has resulted in the fragmentation of land-holdings. Another major reason identified is the shortage of agriculture workers and high wages and high cost of living in Kerala due to Gulf boom and the growth of construction industry. Another factor that has been identified but not adequately researched is conversion of agriculture land for non-agricultural activities. Foreign remittances and increased income of non-agriculture workers made land a commodity which could be bought and sold. The sustainability in agricultural production is secured with a proper utilization of agricultural land. The diversion of agriculture land for non-agricultural activities is a threat to the long term objective of self-sufficiency in the agricultural production as well as food security. This study deals with the impacts of increased transfer of property rights on land (mostly referred as land transactions) and the subsequent conversion of agricultural land on the agricultural production.

Role of Property Rights in Improving Land Productivity

Property rights on land establishes the rule for who can do, with what resources in which land for how long and under what circumstances. The rights on land are viewed as limited and insecure, when it comes to the use of agricultural land. Property rights are important in securing the emotion attached with land. It contributes to economic development in many ways, especially through indirect means.

Any resource being protected by a statute is considered to be more secure than other forms of resources. Land is the

best example for analysing the benefits of being protected by law. When land is protected with property rights, it helps in the better functioning and allocation of the resources of land. Well-defined property rights restrain an individual from over exploitation of land, because he will be in constant fear of losing the right on land. Provision of long term property rights incentives people to use land resources in the most sustainable way for meeting the future needs. This ensures better livelihood for its people.

Property rights enable a tract of land to be eligible for bank loan. Land can be used as collateral for credit. Financial assistance can help in developing alternative agro related businesses which have fewer stakes on nature and can provide good remuneration to the farmer.

Most countries have laws and policies in force that regulate the conditions under which land can be converted from agricultural to non-agricultural uses. Inheritance laws often favour intergenerational transfers of assets within the same family. In general these policies reduce the mobility of assets between agriculture and other economic activities (OECD, 2008).

Statement of the Problem

The trend of the agricultural land transaction for non-agricultural purposes has increased recently in India, particularly in the State of Kerala. The transfer of property rights on agricultural land to non-agricultural purposes is a threat to the proper utilization of such land for agricultural activities. When the property rights on agricultural land are transferred, the transacted land can be further used for agricultural production or kept idle or converted it for non-agricultural purposes. When the land is used to continue agriculture, as assumed by the traditional economic theories, it adds to the agriculture production and thus the growth of the economy. However, if the transacted land is either kept idle or converted for non-agricultural purposes, it is not going to add to

the agricultural production. General observation shows that the use of converted agricultural land for the latter mentioned cases is on an increase. Therefore, much attention has to be given to this otherwise neglected area of research.

This study explores the role of the transfer of property rights on land in the form of land transactions and agricultural land utilization in agricultural production. In this study, we treat the extent of land transactions as an indicator of the extent of property rights transfer on land.

Objectives of the Study

The specific objectives of the study are:

- To assess the trends and patterns of land transactions and agriculture production in Kerala.
- To review the dynamics in land use and agricultural change in Kerala.
- To identify the factors influencing agricultural production in Kerala.

Data and Methodology

The study is conducted for various districts of Kerala based on land transaction details for a selected period after liberalization. All the fourteen districts in Kerala are included in the analysis for a period from 1990-91 to 2016-2017. The study is primarily based on secondary data. In India, there is no uniformity in the land utilization and land conversions databases nationwide. Even the district level data on agriculture area and production are not accessible and in some regions the data recording process itself is very weak (Wadhwa, 2002). The district-wise area and production of principal crops are collected from the publications of Department of Economics and Statistics, Government of Kerala.

Review of Literature

There are several attempts to address the impact of land-use changes on agriculture and forestry and the socio-ecological systems at regional, national and international levels. However, there exist very few literatures on the changing role of land use on agricultural production, especially when the land is considered as a market traded commodity, rather than a fixed productive input.

Land and its redistribution moved from the limelight when the concern about land use patterns became the much discussed issue in the world. This view was expressed by Bergstorm et al (2009) by analysing the importance of land use in the contemporary society. Land use has undergone changes not only when it shifted from rural to urban areas, but also with rural as well as urban areas. The authors identified employment growth, population growth and electronic technologies as the determinants of land use.

Land use changes leads to the problem of food security in most of the developing countries where a lion share of the population derives livelihood and are employed in agriculture. Thus reduction in agrarian land could result in food scarcity. Castro et al (2013) provides an overview of the new global challenges connected with land, food supply and agriculture through a multi-disciplinary approach. The work tries to explain the strategic role of countries in facing the challenge of scarce land in providing food for the growing population. Proper institutional framework is necessary among nations to reduce the extent of land grabs by exploitative developed countries.

Jose & Padmanabhan (2015) attempted to identify the causes of changes in land use and cropping patterns with a special focus on paddy, in the Wayanad district of Kerala. Their study observed that reduced economic viability, labour shortages and population pressure on land are the major drivers for the transformation of paddy fields to other land uses. The nature of urbanisation and increased demand for residential

plots has led to major changes of land from farm to non-farm activities.

As against the assumption of the classical rent theory where changes in the rent and price of the land are expected to make crucial impacts on output, Hirashima (2008) observed that the price of land has been increasing much faster than rent in former Punjab province in Pakistan and India. He showed that the differential growth rate between rent and the price of land is attributable, among other things, to the unregulated land market and excess liquidity at the micro level. The rapidly increasing capital gain in land transactions is a land bubble. The study cautioned that this bubble has to be well attended to reduce the disparity between receivers and payers of rent; otherwise it would retard the necessary investments for future development.

Bunce (1985) examined the implications of exploitation of agricultural land as a real estate commodity. He observed that the speculative investments in land in the North American urban border has resulted in the transfer of ownership of large areas of agricultural land to non-farmers and widespread alienation of landownership from farmers. The stability of agriculture was put at risk by land fragmentations leading to some impressive farmland preservation policies in those areas. Deininger&Jin (2003) described that the high economic growth and a strong non-farm economy are associated with a significant increase in land market activity in Vietnam.

The volume of land transactions in India was relatively very small until the 1990s. Therefore, there are not many studies on the transfer of ownership (property rights) on agriculture land through market transactions. However, a number of studies have tried to explain the reasons for the underdevelopment of agricultural land market in India (see Rawal (2001) for a review). Bardhan (1973) observed that agriculture households do not often sell their land because they consider it as a relatively less risky asset when compared to

other assets. According to Binswanger, Deininger, and Feder (1993), land is having a collateral value for the owner apart from its productive potential. Therefore, the farm owner is not expected to sell his/her land if the collateral value of the land is higher than the price offered for it in the land market. Another reason pointed out for the underdevelopment of land markets in India is the imperfections in the credit markets (Binswanger and Rosenzweig, 1986). Since the credit markets were not well developed before the economic liberalization of 1990s, there were very little options for financing the land transactions.

Sarap (1996) analysed the unique characteristics of land market transaction in Haryana and observed that the evolution of land ownership structure in Haryana is quite different from other parts of India. There was an increased portion of people, who believe that land holds so much of prestige and hence, the incidence of selling land happens very seldom. Land has become extremely important to regions where it is difficult to find an alternative source of employment. In rural community where the caste and community bonds are very high such factors enhance the reluctance for the sale of land. Asymmetry of information in the rural community has also resulted in low sales turnover of land. Sale of land usually happens due to rural urban migration and a number of households with lump sum cash earning from service or other income have converted these earnings into a stable form of property by- purchasing land. Yet these activities couldn't contribute to the increase in agricultural produce in rural Haryana.

Kannan (2012) discusses the reasons for declining share of agriculture in India's GDP over the period 1967 to 2008. His study found that enhanced capital formation, better irrigation facilities, normal rainfall, and improved fertilizer consumption are the major factors that boost the crop output in the country.

Over the years it was believed that the efficient and prudent role by government can help in developing agriculture of any region. A contrasting view was provided by Nair

&Dhanuraj (2016), by explaining the distortions created by government intervention in agricultural sector. They argue that the major reason for the collapse of agriculture in Kerala is the disincentives created by the successive governments in Kerala through imposing artificial barriers on the freedom of farmers and agricultural entrepreneurs. The linkage effect prevailed in agriculture and land reforms have benefited the rich farmers only. Mismanagement in irrigation despite of high investment, rent seeking and nepotism has aggravated the situation and pushed marginal farmers into severe trouble. In the marketing regime, primary agriculture credit societies failed to maintain the credit base of agriculture and the implementation of Minimum Support Price also couldn't reap expected benefits. Thus, excessive government intervention in credit procurement pricing is the main lead to the stagnant growth in Kerala's agriculture.

Mahesh (2000) made an enquiry into the relationship between the farm size and productivity taking evidence from Kerala in the post reform period. He observed that the land reform policies in Kerala have resulted in a great extent of land fragmentation, instead of land consolidation as expected. The study concluded that the productivity of farms does not show any clear relationship with farm size. This may be because that the productivity is related to a variety of factors like crop mix, input use, labour employed, management of crop-related activities etc. in addition to farm size. The debatable view on the size of farm land its impact on productivity has also been explored by Helfand & Levine (2004) in the context of centre west Brazil. The study found a U shaped relationship between farm size and productivity. The results lend further support to the view that differential access to institutions, and use of technologies and inputs, can significantly alter the usual findings of an inverse relationship between farm size and productivity.

There are quite a large number of literature investigating the changes in land-use and cropping pattern in

India and also for Kerala. However, these studies that focused on the impact of changing land use pattern on agriculture have not considered the land market dynamics.

Dynamics in Land Use and Agricultural Change in Kerala

Land is the fundamental means of production in an agrarian society without which no agricultural production can take place. An understanding of the pattern of ownership and operational holdings of land is, therefore, of central importance to an understanding of the agrarian class structure. Impact of dynamic land use changes on agriculture is a major concern in any economy. The sustainability in the agricultural production is secured with a proper utilization of agricultural land. Land resources and agriculture are more important to a developing nation like India because the livelihood of about 60 per cent of its people depends on agriculture. The linkage between land use and agriculture changes is particularly evident in Kerala. Within India, Kerala stands apart in many aspects, especially its geographical terrain and climatic conditions that are suited to different kinds of mixed farming with a large proportion of perennial crops.

Kerala has been in national and international attention for its combination of low economic growth with high social development, compared to the rest of India and to other developing countries. Kerala has succeeded in achieving a quality of life nearly comparable to the developed countries with remarkable performance in key areas of human development, particularly education, health and social welfare measures (Issac and Tharakan, 1995). Since 1956, successive governments in Kerala have been instrumental in improving health and education, and have also introduced radical land reforms, relatively high minimum wages, and a wide network of social security schemes. However, Kerala currently faces a number of crises, including low economic growth

with agricultural sector on a continuous decline, high unemployment, and a mounting fiscal crisis.

Agriculture in Kerala is characterized by intensive use of land. Due to the very small size of holdings most of the farmers considered agriculture as a subsidiary occupation. In recent times, a trend towards non-agricultural land use challenges the sustainability of farming systems. This section discusses the policy and growth framework of land market and agricultural production in Kerala from a historical perspective.

Agricultural Land Reforms in Kerala

The agriculture land reform policy introduced in 1970, also known as ‘land to the tiller’ policy, has resulted in a revolutionary change in the history of land utilization and agriculture production in Kerala. Though soon after the land reform policy there was a remarkable improvement in the agriculture production, there was a slow but consistent collapse of the state’s agriculture sector. The contribution of agriculture to the Gross State Domestic Product (GSDP) has steadily declined from 36.8 per cent in 1980-81 to a mere 8.95 per cent in 2013-14 (Government of Kerala, 2014).

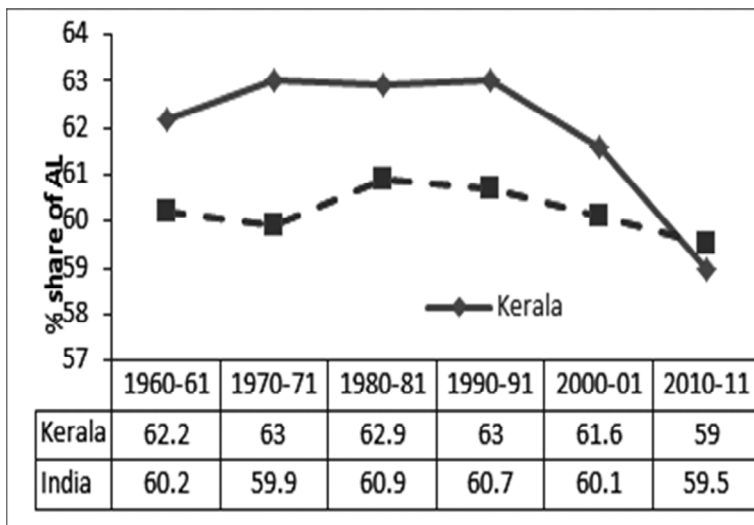
In 1960-61 Kerala produced more than 10 lakh tons of rice. By 2012-13 rice production was down to 5.08 lakh tons. By 2012-13, in just a single year, area under rice cultivation had declined by 5.2 per cent, and the production itself dropped by 10.2 per cent. The state is producing only about 12 per cent of its total requirement for rice. In 1960-61, Kerala contributed to nearly 70 per cent of the country’s coconut production. In 2012-13, it was at about 40 per cent (Government of Kerala, 2011). However, when it comes to cash crops like cashew and pepper, there has been consistent increase in production, although the area under cultivation has been reducing.

Land Use Pattern in Kerala and India.

A comparison of percentage share of land under agricultural uses in Kerala and all-India (Figure 9.1) shows that

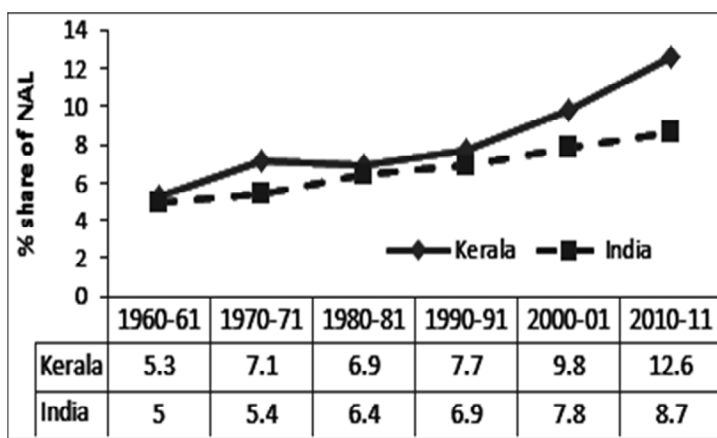
the share of land used for agriculture is declining at a faster pace in Kerala as compared to the all-India level. At the same time, the share of land for non-agricultural uses is increasing at a higher rate in Kerala as compared to the all-India level (see Figure 9.2). These clearly indicate that there is a serious issue in the agriculture land use pattern in Kerala when compared to all-India status.

Figure 9.1 Comparison of Percentage Share of Land under Agricultural Uses in Kerala and India



Source: DES, Government of India (Adapted from Andrews, 2016)

Figure 9.2 Percentage Share of Land under Non-Agricultural Uses in Kerala and India



Source: DES, Government of India (Adapted from Andrews, 2016)

Based on above observations and arguments, the study has the objectives to analyse the dynamics of land use and agricultural change in Kerala and to identify the possible socio-economic factors that caused these changes, and to assess the recent challenges on land use and agricultural production in Kerala.

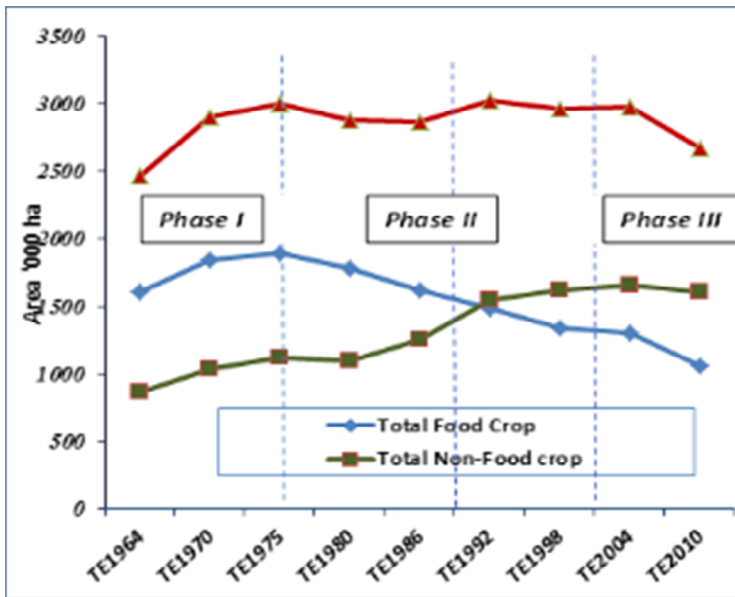
Dynamics in Land Use and Agricultural Change in Kerala

Land use pattern and agriculture in Kerala have undergone various changes since the state's inception. Both government interventions and market dynamics together realized these changes. This section analyses the dynamics in land use and agricultural change in Kerala by classifying Kerala's agricultural growth into four different phases based on the trends in the area sown as given in Figure 9.3.

- Phase-1 (1960-1975): The Land Reform Phase and Intra-regional migration of agricultural households.

- Phase-2 (1975-1991): Post Land reforms and Labour migration to Gulf and other countries.
- Phase-3 (1992-2000): Economic liberalization and increased opportunities for educated people.
- Phase-4 (2001 onwards): Intra-generational economic mobility of agricultural households.
 - Growing NRKs from agricultural families
 - Growth of real estate sector

Figure 9.3 Trends in Area Sown in Kerala



Source: Kerala Agriculture Statistics, DES (compiled from Andrews 2013)

Phase 1: The Land Reforms (1960-1975)

Major land reform policies have been adapted during this period. As a result, there was a major redistribution of agricultural land from landlords to tenants. George (1986) observed that the land reform policies have actually resulted in the decline of average size of land holdings from 0.57 ha. in 1970-71 to 0.49 ha. in 1976-77. But, there was an increase in the total area sown and also the areas under food and non-food crops (Andrews, 2016). During this period land was considered both as a productive input (economic consideration) and an asset for social status (social consideration).

Phase 2: Post Land Reforms (1975-1991)

There was stagnation in Kerala's agricultural growth since the mid-1970s. All crops, except paddy, registered a decline or no trend in land productivity (Kannan & Pushpangadan, 1990). The land reforms initiated in the 1960s, of course, had its short term impact on the agricultural production, especially in paddy production. It also helped in reducing the extensive social inequality prevailed in Kerala society by providing some degree of economic freedom to the lower caste tenants. However, the land reform policies have resulted in large fragmentation of agricultural land. The tenants got ownership of land but not the other resources, such as financing and marketing, for cultivation management. At the same time, from the late 1960s there was widespread unionisation and organized profile of labour (Kannan, 1998) which has resulted in higher wages for labour, especially rural labour. Since the mid-1970s, the rate of growth in agricultural wages was higher than the rate of growth in labour productivity (Kannan & Pushpangadan, 1988). There was towering opposition for substitution of high cost labours with any other less labour intensive production techniques. There was increased resistance to any kind of mechanization in agriculture. For example, Kannan (1998) pointed out that there was high opposition of mechanization of agriculture operations

(especially in paddy cultivation) during the Green Revolution in the 1970s. During this period, land was mostly tied to labour and never allowed to go with capital (mechanization).

Such developments have resulted in high rate of crop substitution from more labour-intensive crops (food crops) to less labour-intensive crops (non-food crops), reducing employment opportunities in agriculture. The agricultural land use has moved from food crops (seasonal crops) to non-food crops (perennial crops). For instance, the area under paddy has declined by 40 per cent from the mid-1970s to mid-1990s. Along with increased labour cost the decline in productivity and soil quality from intensive farming made paddy cultivation increasingly unprofitable. There were extensive conversions of paddy fields and wet lands to dry lands for growing cash crops that require relatively less labour (Jose & Padmanabhan, 2015). JeemolUnni (1983) observed a trend towards substitution of paddy in favour of coconut on paddy lands. She observed that the net area under rice has been falling since the early 1960s and more markedly in the 1970s, while the area under coconut has been growing rapidly throughout the period. However, there is no much evidence of land moving from a productive resource in agriculture to an investable asset, even though there were increased land transactions in certain areas enriched by the Gulf boom during this period. Most of these land transactions were in the form of small holdings mainly for house or building construction purposes.

Phase 3: Economic Reforms (1992-2000)

The economic reforms of 1990s have opened up several opportunities as well as challenges to Kerala's agriculture sector. Since Kerala has its own unique agricultural products that are mostly demanded outside the state, the trade openness and the trade agreements as part of the economic reforms are supposed to improve its agricultural production. There was a revival of agriculture in Kerala in the beginning of the nineties which was reflected in the increasing trend in the net area sown.

This revival was mainly because of the increased cultivation of high-valued plantation crops like rubber (Jose & Padmanabhan, 2015). The area under non-food crops has continued its increasing trend during this period, but at the expense of area under food crops (see Figure 9.3). However, by the latter part of the 1990s due to some of the ill-planned trade liberalization policies, prices crashed in most of the commodities leading Kerala's agriculture into an unprecedented crisis.

Phase 4: Inter-generational Mobility (2001 onwards)

The fourth phase of Kerala's agriculture sector is now witnessing a serious problem of inter-generational economic mobility among agricultural households. The first generation of farmers in Kerala was mainly depending on agriculture for their primary source of income and livelihood. They have used their hard-earned income to educate their children and to get higher qualifications, which helped them to find highly remunerative other opportunities. Due to the increasing cost of cultivation owing to consistent increase in agricultural wages and the poor returns from agriculture when compared to the other alternative activities, the second generation of agricultural households slowly moved away from agriculture. In most of these households, agriculture is not their primary source of income and livelihood. These second generation inheritors of cultivable lands with their prime livelihood from other occupations chose to be passive land owners (Jose & Padmanabhan, 2015). Many of them moved out of Kerala either to other states or abroad. During this fourth phase, there was increased labour migration to non-Gulf regions, especially to the West. Rajan & Zacharia (2018) observed that the share of emigrants to Gulf Region has fallen from 93.8 per cent in 1998 to 85.4 per cent in 2013.

The number of people engaged in agricultural activities has been reducing in the State due to high returns from other entrepreneurial ventures or business and service sectors. The population of agricultural labourers in Kerala is also decreasing due to migration of labour force to construction, manufacturing

and service sectors. On analyzing the census population of cultivators and agricultural labourers in the State in 2001 and 2011 years, it is observed that both the number and share of cultivators and agricultural labourers had reduced. The decadal rate of decline of cultivators and agricultural labourers is 7.4 per cent and 18.4 per cent respectively.

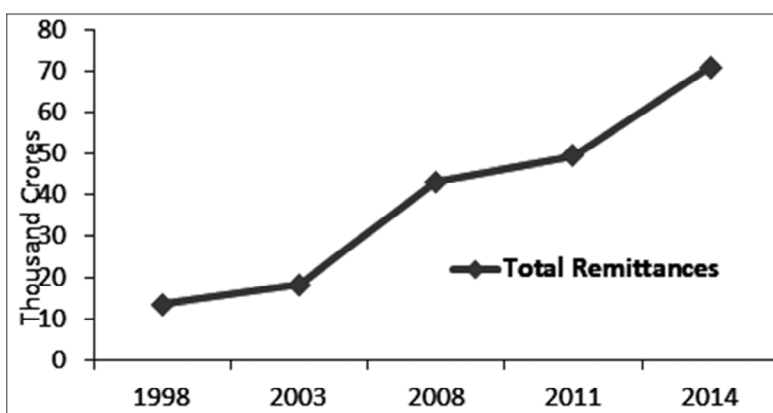
Table 9.1 District Wise Percentage of Cultivators and Agricultural Labourers to Total Population as Per 2011 Census

District	Total cultivators			Total Agricultural labourers		
	To tal	Male	Female	To tal	Male	Female
Thiruvananthapuram	1.2	1.9	0.5	2.9	4.5	1.3
Kollam	2.2	4.0	0.5	3.5	6.0	1.3
Pathanamthitt	3.5	6.5	0.8	4.6	7.9	1.8
Alappuzha	1.2	2.0	0.4	3.4	4.2	2.6
Kottayam	2.5	4.5	0.6	3.2	4.7	1.7
Idukki	9.1	13.9	4.3	13.4	14.5	11.8
Ernakulam	1.5	2.6	0.5	2.2	2.8	1.5
Thrissur	1.3	2.2	0.6	2.4	3.1	1.7
Palakkad	2.4	3.9	1.0	8.9	9.5	8.3
Malappuram	1.4	2.6	0.3	2.9	4.9	1.0
Kozhikode	0.9	1.5	0.3	2.1	3.2	1.0
Wayanad	6.5	10.5	2.5	12.4	15.1	9.9
Kannur	1.4	2.4	0.6	3.3	4.1	2.6
Kasaragod	1.8	2.9	0.8	3.0	4.1	1.9
KERALA	2.0	3.4	0.7	4.0	5.4	2.7

Source: Census of India, 2011

Figure 9. 4 shows the drastic increase in the remittances to Kerala from abroad, especially since the year 2003. The Kerala Migration Survey (KMS) (2014) indicates a very significant surge in remittances during 2003-2014. This increase was very radical during 2003 to 2008 as shown in Table 2, where the percentage increase in remittances was about 134.4 per cent. According to Zachariah & Rajan (2015), remittances account for about 36.3 per cent of the state's net domestic product (NSDP). In the early years of migration a major proportion of remittances were used for household consumption expenditure, house construction and marriage and education expenses (Zachariah et.al., 1999). However, studies (see for example Raj & Azeez 2009) have observed that since 2003, there was increased channelization of foreign remittances directly to the land for speculative investments as there were not many alternative avenues available for profitable investment. This has resulted in a 'real estate boom' in Kerala and as a result land has become more of speculative commodity rather than a productive resource. Furthermore, the demand for land has also been influenced by the proliferation of housing finance and the use of credit purchase (HariKurup & Sumayya, 2009).

Figure 9.4 Remittances to Kerala



Source: Kerala Migration Survey 2014, CDS

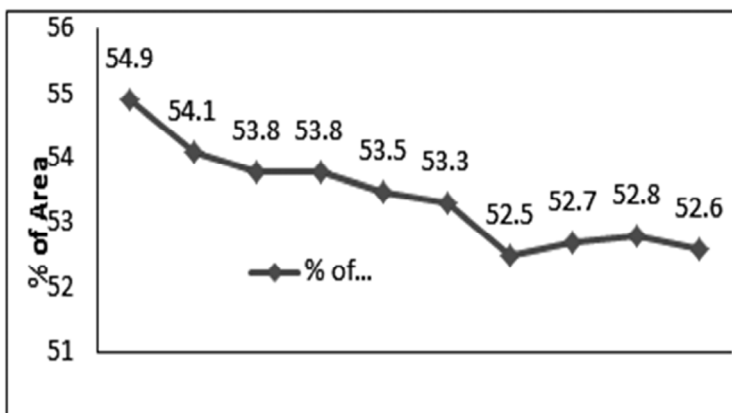
Table 9.2.Total Remittances to Kerala, 1998-2013

Year	Remittances (in crores)	Per cent Increase	Remittances Per Household
1998	13652	-	21,469
2003	18465	35.3	24,444
2008	43288	134.4	57,215
2013	71142	64.3	86,843

Source: Kerala Migration surveys 1998-2013.

All these have affected the agriculture land utilization and cropping pattern in Kerala. As shown in Figure 3, there was drastic fall in total area sown and fall in the area under both food crops and non-food crops. The net cropped area to total geographical area has fallen from around 55 per cent in 2005-06 to 52.6 per cent in 2014-15 (see Figure 9. 5).

Figure 9.5 Proportion of Net Cropped Area to Total Geographical Area – Trends From 2005-04 To 2014-15



Source: Directorate of Agriculture, Government of Kerala (2016)

This chapter has attempted to trace the factors influencing the dynamics in land use and consequent agricultural changes in Kerala. Towards this purpose the study has classified the agricultural growth of Kerala into four phases based on the trends in the total area sown. Then, various factors that influenced the changes in the land use pattern have been analysed followed by its impact on agriculture in the form of changes in cropping pattern and net area sown.

The analysis shows that declining productivity due to large fragmentation of land followed by land reform policies, increasing cost of labour due to unionism, large inflow of foreign remittances without much investment alternatives, changes in intergenerational occupational preferences, and population pressure on land are some of the major drivers for the transformation of agricultural land to other uses in Kerala. The changes in land use and agrarian structure mainly reflect the farmers' responses to these drivers (Jose & Padmanabhan, 2015).

One of the issues identified for the fall in agricultural production in Kerala is the decline in productivity due to large fragmentation of land especially due to the land reform policies and the inheritance system followed in Kerala. Most of the perennial crops suitable for the geo-climatic conditions of Kerala cannot be profitably cultivated in small sized holdings. Another issue identified in Kerala's agricultural sector in recent years (especially in Phase 4) is the inter-generational mobility in agricultural households that results in uncultivated or under-cultivated agricultural land. There exists a dilemma that the owners of agricultural land are either not interested in farming or do not have sufficient time for farming, while those who are interested and available for farming do not have their own land.

Trends and Patterns of Land Transactions and Area under Agriculture in Kerala: A District-Wise Analysis

The agriculture sector in Kerala has been undergoing significant transformation over its past 60 years. The process of land reforms that was initiated by the first Government of Kerala in 1957 and completed by the end of the 1970s led to the conferring of ownership rights over agricultural land to 1.2 million tenant cultivators (Radhakrishnan, 1981). From the 1970s, the time of the oil boom in the Gulf countries, increased migration and remittances from abroad have resulted in a significant transformation of Kerala's economy. Specifically, high land prices have altered the land-use pattern in the State (Zachariah & Rajan, 2011). Agricultural land use change is the fundamental driver shaping societal structure and natural resource dynamics (Jose & Padmanabhan, 2015).

The unique physio- climatic conditions favours a sustainable agriculture in Kerala, which is well adaptable with changing requirements of land and crops. The state of agriculture in Kerala has been undergoing wide range of changes and always strived to serve as a base for inclusiveness and growth. Over the years, the focus of agriculture in Kerala has changed from self-sufficiency to local trade and then to intra state trade. The crops like pepper and spices enjoy the upper hand in international markets as well.

Land Transactions in Kerala

One of the most difficult tasks in conducting research on the property rights transfer on land in India, especially in Kerala, is the non-availability of consolidated data on land transactions. In most of the Indian states, the digitalization of land documents is underway. Kerala state is also in the process of the computerization of land documents and the details of land transactions. It is of course a herculean task to digitalize all the land documents and their transaction details in the archives with the available number of employees and facilities in the

Department of Registration. Therefore, one of the main difficulties in conducting this research is the collection of land transaction data at district level for the past years. As part of this research, an attempt has been made to collect data, as far as possible, by directly approaching the Registrar and Sub-Registrar offices of the Department of Registration, Government of Kerala. Based on the collected data the following analysis has been done.

Figure 6 shows the trend in the number of land registrations in Kerala since 1984-85. It is clear from the graph that there was a considerable increase in the number of land transactions in Kerala since 1991. After the economic liberalization policies of 1991 there were increased opportunities for educated Keralites to secure employment in the newly emerged service-based industries like Information Technology (IT) and IT related services. This along with the increased inflow of foreign remittances resulted in increased land transactions. There was more commoditization of land, moving its considerations from a productive resource to an investable asset and then to the speculative asset. There were evidences of widespread conversion of paddy fields for real estate and construction activities (Jose & Padmanabhan, 2015).

Figure 9. 6 Documents Registered in Kerala (1984–2011)



Source: Department of Registration, GoK (Adapted from Baiju (2013))

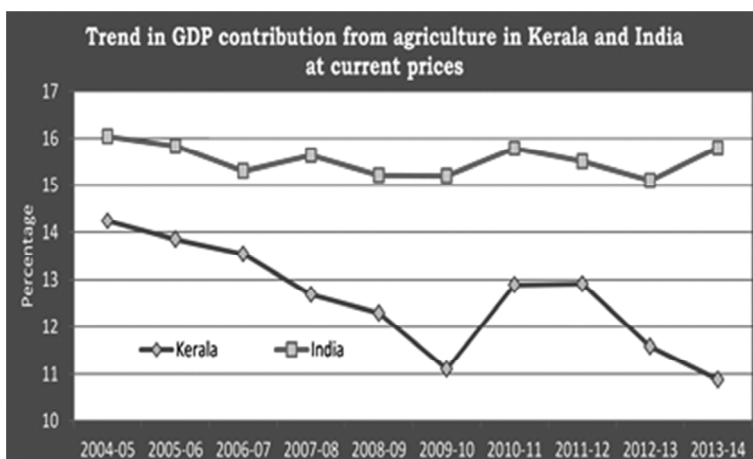
This upward trend in the number of land registrations continued until the year 2012. However, with the increase in land registration fees, stamp duties, and fair value of land, along with other quantitative restrictions caused a decline in the number of land transactions.

Agriculture Situation in Kerala

The evidence shows that the area, output and productivity of major crops in Kerala are on a decline since the mid-1970s. While the relative share of agriculture in the GSDP of Kerala is one of the lowest among other states in the country, the relative share of service sector is the highest. And of those

households in Kerala, nearly two-thirds earn income from activities other than agriculture.

Figure 9.7 Trend in GDP Contribution from Agriculture in Kerala and India at Current Prices.

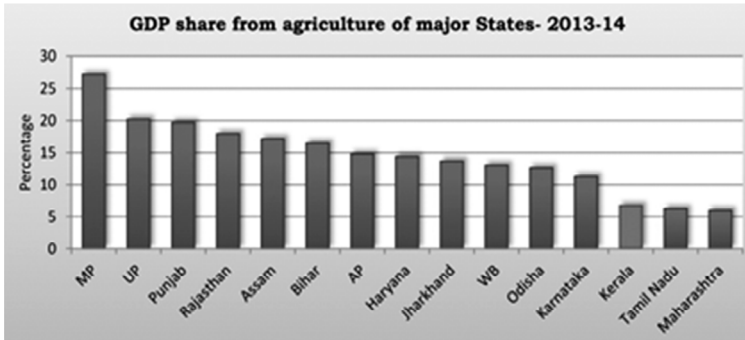


Source: Directorate of Agriculture, Government of Kerala, 2016.

It is, of course, not a mere structural transformation of Kerala from an agrarian economy to a non-agrarian economy as predicted in growth theories. As shown in Figure 8, Kerala is third from bottom, just above Tamil Nadu and Maharashtra in terms of GDP share from agriculture during 2013-14. While the main reason for low GDP share from agriculture in Tamil Nadu and Maharashtra is their rapid industrialization process, Kerala does not have anything like that to claim as the reason.

The agro climatic conditions in Kerala are different from any other states in India. It mainly suits for the cultivation of seasonal and perennial crops. The major crops cultivated in Kerala include cash crops like coconut, rubber, tea, coffee, pepper, cardamom, arecanut, ginger, nutmeg, cinnamon etc. and food crops like paddy, tapioca (Government of Kerala, 2016).

Figure 9.8 GDP share from Agriculture of Major Indian States – 2013-14.



Source: An Analytical Study on Agriculture in Kerala, Directorate of Agriculture, Government of Kerala, 2016.

The agriculture situation in Kerala was not so bad in the 1960s. The area under cultivation increased from 2.3 million ha in 1960 to 2.9 million ha during 1969, mainly because of a dramatic rise in the coverage of rice. Since then, however, the total cropped area remained more or less stagnant. While the area under rice cultivation plummeted by about 60per cent between 1975 and 2003, the area under coconut and rubber increased by 106per cent and 627per cent, respectively between 1955 and 2000 connoting “coconut and rubber boom”. Other crops that gained substantial coverage over the same period include arecanut (41 per cent), banana and plantains (96per cent). Cassava, however, lost much of the area that it occupied in the mid-1970s, showing a clear shift away from food crops, mainly rice and cassava, in favour of tree crops such as rubber and coconut and some of the export-oriented cash crops such as pepper, ginger, coffee and cashew (Kumar, 2005).

George & Chattopadhyay (2001) observed that such shifts in land-use may have profound implications for the food security of the state, which already depends on ‘outside supplies’ to meet more than half the its food grain requirements.

Kumar (2005) observed that in addition to the shift in land use, population growth and urbanisation have led to a marked increase in clay mining (for brick making) and other non-agricultural uses of land, which further exacerbated the situation. According to him, between 1961 and 2001 the cultivated land per capita has dropped from 0.14 to 0.077 ha mainly because of population growth during that period.

Trends in Growth Rate of GDP From Agriculture Sector in Kerala in Recent Years

Table 9.3 shows the GDP contribution from agriculture at current and constant prices over the years from 2005-06 to 2013-14 in Kerala and India. This comparison confirms that the decline in the GDP share of agriculture in Kerala is much faster than the decline in that of all India.

Table 9.3 GDP Contribution from Agriculture - Kerala Vs India

Year	Kerala		India	
	Current prices	Constant (2004-05) prices	Current prices	Constant (2004-05) prices
2004-05	14.24	14.24	16.04	16.04
2005-06	13.85	13.74	15.83	15.46
2006-07	13.54	11.69	15.3	14.69
2007-08	12.68	10.51	15.63	14.29
2008-09	12.29	10.16	15.21	13.36
2009-10	11.1	9.03	15.2	12.35
2010-11	12.89	7.83	15.78	12.42

Source: Department of Economics & Statistics, Kerala and website of Planning Commission (<http://planningcommission.nic.in>)

The share of agriculture in GDP for Kerala in 2004-05 14.24 per cent (at constant prices), but within a gap of six years it declined to almost 7.83 per cent by the year 2010-11. However, for all India the percentage contribution of agriculture sector has fallen only slowly from 16.04 per cent in 2004-05 to 12.42 per cent in 2010-11. This indicates that the pace of structural transformation of Kerala economy was much faster during this period. This was also the period when the number of land transactions in Kerala has been at its peak (see Figure 9.6).

Table 4 gives the growth rate of GDP from agriculture and that of total GDP at constant prices over the years from 2005-06 to 2013-14 in Kerala and India.

Table 9.4 Growth Rate of GDP from Agriculture Sector in Kerala and India at Constant (2004-05) Prices

Year	Agriculture Growth Rate		GDP Growth Rate	
	Kerala	India	Kerala	India
2005-06	6.25	5.53	10.09	9.48
2006-07	-8.17	4.13	7.9	9.57
2007-08	-2.24	6.34	8.77	9.32
2008-09	2.08	-0.27	5.56	6.72
2009-10	-3.01	0.41	9.17	8.59
2010-11	-7.28	9.54	6.92	8.91
2011-12	5.6	5.34	5.85	6.69
2012-13	1.47	0.91	5.92	4.47
2013-14	-2.88	4.93	6.27	4.74

Note: GDP from Agriculture subsector includes animal husbandry and dairying also, because the exact figures of income generated in respect of each cannot be segregated.

Source: Department of Economics & Statistics, Kerala and website of Planning Commission (<http://planningcommission.nic.in>)

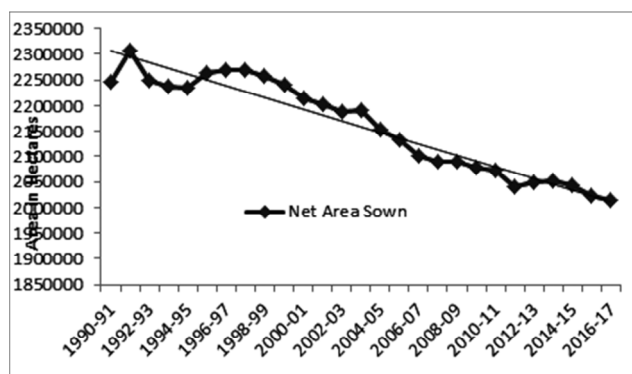
Studies (like Kannan & Pushpangadhan, 1988, 1990; Kannan 1998, 2011, etc.) have identified various reasons for such drastic decline in agriculture, which include (i) increasing population and density of population, (ii) highly fragmented and small size of land-holdings, (iii) shortage of labourers/ workers and high wages, and (iv) demand for land for non-agricultural purposes. In short, as a general conclusion we can say that poor return from farming and high labour cost forced many farmers to keep away from agriculture.

District-wise Trends in Net Area Sown

Net area sown refers to the proportion of the total area which has been cultivated with crops. In calculating net area sown, area sown more than once will be calculated as once. This means that area cultivated at any period of the agricultural year should come under net sown area. The change in land use pattern is a result of changing human environment interactions.

According to a study by Pillai (1994), the decline in agricultural production started to dwindle from late seventies mainly in account of the loss in area under food production.

Figure 9.9 Trends in Net Area Sown in Kerala – 1990-91 to 2016-17



Source: Department of Economics and Statistics, Government of Kerala.

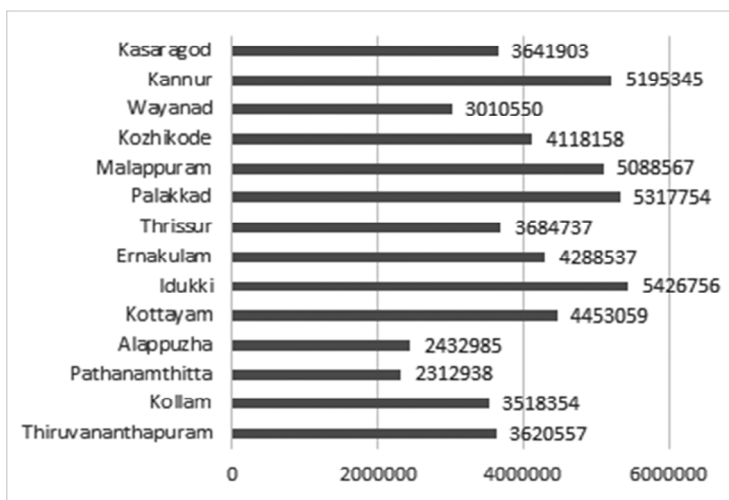
Table 9.5 District-wise Net Area Sown

District	1990-91	1995-96	2000-01	2005-06	2010-11	2015-16
Thiruvananthapuram	144481	145401	143139	140414	133559	126580
Kollam	143181	145742	142233	131975	125999	123563
Pathanamthitta	100125	96470	92805	83332	81772	80223
Alappuzha	105678	103561	94328	87206	87445	83590
Kottayam	181317	180794	173494	168800	164451	161368
Idukki	187566	206148	225689	214363	206809	205680
Ernakulum	182263	180441	169661	140218	155887	149089
Thrissur	153950	156310	154250	139596	127185	129942
Palakkad	217032	207901	204169	220743	196818	191277
Malappuram	210041	207203	200981	193067	178341	174237
Kozhikode	162752	163932	160094	158936	155960	149940
Wayanad	115736	117648	116065	117984	114966	113313
Kannur	203096	209724	202502	200623	200367	188213
Kasaragod	139556	143567	135716	135226	141948	146058

Source: Compiled from Agricultural Statistics (various years), Department of Economics and Statistics, Government of Kerala.

Analysing the Net sown area across districts, highest share accounts for the districts of Kannur, Palakkad, and Idukki. Over the years the trend is decreasing in majority of districts except Idukki and Kasaragod. The decline is gradual in most of the districts, but the trend is alarming in Ernakulum and Kozhikode because of the tremendous rate of decline. Net sown area has recorded a slight decline of 8.64 per cent, and the area sown more than once has declined by 30.29 per cent (Government of Kerala, 2017)

Figure 9. 10 Net Area Sown in Hectares (Total 1990-91 to 2015-16)



Source: Department of Economics and Statistics, GOK. Various years

Figure 9.10 shows the total of Net area sown in all the districts over the time period between 1990-91 and 2016-17. It can be noted that Idukki and Palakkad has the maximum share of net area sown in Kerala. Alappuzha and Pathanamthitta accounts for the least net area sown. Except Idukki, Kasaragod and Wayanad all other districts are showing a steadily decreasing trend in the Net sown area with the maximum rate of decline in Ernakulam and Thrissur districts.

District-wise Area of Production under Food Crops

The total agricultural area utilised for food crop production will be calculated for all the districts. Palakkad accounts for the highest production of food crops whereas the least cultivation accounts for Pathanamthitta. The area under production of food crops has been declining ever since 1990-91 in all districts except two. In the case of Idukki the area has

constantly increased over years roughly from 97000 to 135000 hectares. The area of production increased initially and later decreased in Wayanad after 2007.

**Table 9.6 District-wise Trends in Area under Food Crops
(in hectares)**

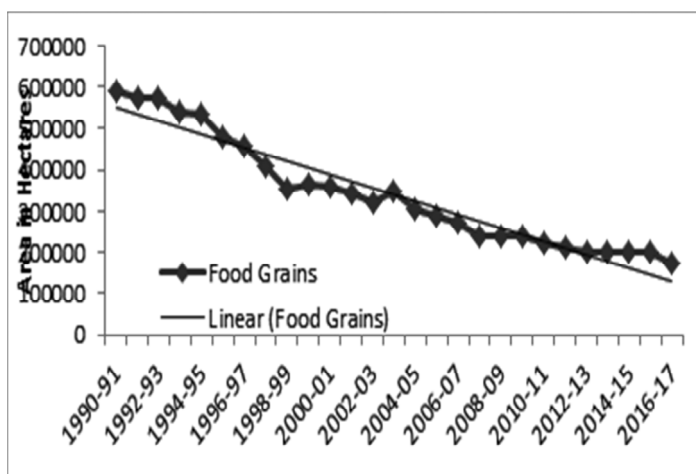
District	1990-91	1995-96	2000-01	2005-06	2010-11	2015-16
Thiruvananthapuram	94533	82274	73502	62494	47985	51677.09
Kollam	108801	98449	90781	80923	59916	54158.18
Pathanamthitta	52588	41516	39166	39031	29116	27767.98
Alappuzha	98786	81006	70890	56603	59324	55303.01
Kottayam	75421	63911	60340	55762	49905	49934.78
Idukki	96882	118230	136896	160277	171161	133401.8
Ernakulum	112654	103830	92064	85719	61654	54041.31
Thrissur	120871	108785	88591	87069	63249	69745.09
Palakkad	233260	236598	203077	207919	173722	162439.8
Malappuram	137767	118827	114417	113402	78805	79832.46
Kozhikode	77637	76809	76803	75445	52972	52252.1
Wayanad	77412	103231	111690	116116	74421	74201.67
Kannur	136333	137931	126216	113988	74076	71704.79
Kasaragod	73237	70053	64643	63896	45234	45841.59

Source: Compiled from Agricultural Statistics (various years), Department of Economics and Statistics, Government of Kerala.

District-wise Area of Production of Food Grains

Food grains production plays an important role in attaining the goal of self-sufficiency and sustainability in food production. Kerala depends mainly on cereals and other grains since rice is a staple food item in Kerala. In this context the decline in food grain production imposes a serious threat in the food security of the state. Analysing the trend over the districts over the years, the rate of decline is maximum in most of the districts such as Thiruvananthapuram, Kollam, Idukki, Ernakulum etc. The rate of decline is multiple folds at most of the districts, which makes it clear the ill effects of reduced land under production. Agriculture development experience of the State since the late seventies has been characterised by sharp decline in the area under food crops, mainly paddy and the substantial expansion in the area under commercial agriculture dominated by plantation crops.

Figure 9.11 Trends in Area under Food Grains in Kerala 1990-91 to 2016-17



Source: Compiled from Agricultural Statistics (various years), Department of Economics and Statistics, Government of Kerala.

Area under food grain production also shows a declining trend over the years. Palakkad tops in food grain production whereas Idukki accounts for the least. Paddy, Pulses and Grains include the category of food grains. Paddy accounts for the major share of food grains. Paddy is cultivated in three seasons in all the districts of Kerala except Wayanad district. In Wayanad there is no autumn paddy cultivation. The staple food of Kerala, paddy is facing a fall in the area under cultivation owing to the cost of cultivation and the less promising remuneration. The area under paddy cultivation in the state is decreasing regularly (Agricultural Statistics 2016-17, GoK, 2017).

Table 9.7 District-wise Trends in Area under Food Grains (in hectares)

District	1990-91	1995-96	2000-01	2005-06	2010-11	2015-16
Thiruvananthapuram	24524	17046	7515	5222	2962	2244
Kollam	31967	23280	15278	7768	3454	1648
Pathanamthitta	14427	10886	6443	3311	2986	2542
Alappuzha	61013	44166	37800	28880	37113	31763
Kottayam	28061	24878	17278	12659	14839	16408
Idukki	6248	4916	4097	3172	1897	1167
Ernakulam	65320	56533	38598	25721	9159	6236
Thrissur	75276	58728	39765	31727	20288	24642
Palakkad	159618	145816	123823	121540	92567	82651
Malappuram	52740	37928	23489	15791	9089	8957
Kozhikode	12887	8749	7138	4879	3015	2878
Wayanad	20641	20392	15259	11988	11574	9685
Kannur	22206	16814	12823	9950	6565	6124
Kasaragod	15161	11670	9624	6571	4217	4008

Source: Department of Economics and Statistics, Government of Kerala.

District-wise Area of production Non-Food Crops

Over the years, the high price expectations and favourable climatic conditions has led to an increase in the area under production of non-food crops. Kottayam accounts for the highest production of non-food crops followed by Malappuram, Kozhikode and Kannur. The major non-food crops are rubber, betel leaves, lemon grass, etc. Except the districts of Trivandrum, Kollam, Alappuzha and Ernakulam all other districts shows an increasing trend in the area allotted for production of non-food crops. This must have contributed to the decline in food crops in most of the districts. An interesting trend is visible in the production of two crops in Kerala viz., rubber and rice. The area under production of rice is declining where that of rubber is increasing. This poses a serious threat on the long run sustainability of food sector in Kerala. Plantation crops are important from the national point of view. Many families are dependent on the income generated from plantation crops.

Table 9.8 District-wise Trends in Area under Non-Food Crops (in hectares)

DISTRICT	1990-91	1995-96	2000-01	2005-06	2010-11	2015-16
Thiruvananthapuram	112522	121685	121277	117727	106125	111171
Kollam	114291	121606	121548	108552	99790	95159
Pathanamthitta	74831	75075	76107	76056	74325	75803
Alappuzha	74982	75273	67705	64808	49165	46195
Kottayam	166464	158700	165062	163909	156884	153815
Idukki	97959	112064	130456	138385	137107	137085
Ernakulam	134132	124013	131211	122404	109920	111495
Thrissur	93584	103897	109237	106118	97967	104530
Palakkad	105797	120522	107795	121639	129739	131000
Malappuram	136998	148323	154088	162198	158669	161753

Kozhikode	137894	144865	152787	153717	148889	148590
Wayanad	80900	93525	97251	96620	100879	105286
Kannur	124951	138557	148622	144049	136775	153737
Kasaragod	68493	87727	89460	90901	99687	109656

Source: Compiled from Agricultural Statistics (various years), Department of Economics and Statistics, Government of Kerala.

The trend is quite different from that in the case of food crops. The rate of decline is not evident in most of the districts. This leads to the viable commercial market available for non-food crops which makes it difficult for food crops to compete in the market. The perishability of food crops and the lack of adequate storage facilities make it difficult for food crops to gain momentum in Kerala. The laterite soil in Kerala accounts for about 60 per cent of total land and helps in the production of perennial crops like coconut, rubber pepper, cashew etc. Most of the crops require humid conditions and relatively heavy rainfall, which is the general climatic condition of Kerala.

District-wise Trends in Total Cropped Area

The total cropped area or gross area sown represents the total area cultivated under all food and non-food crops including the area sown more than once during a particular year. According to this concept the area under various crops in the same plot can be more than the actual area. (Government of Kerala, 2017). Under total area cropped Palakkad accounts for the highest and lowest is in Pathanamthitta.

The total cropped area of the State has been declining consistently, from 30 lakh hectare in 2000 to 25.84 lakh hectare in 2016-17 (Government of Kerala, 2017). According to Lakshmi and Pal (1988) one of the major changes that had been taking place in Kerala was the gradual shifting of the area from food crops like rice to plantation crops like rubber and coffee and cash crops coconut and cashew.

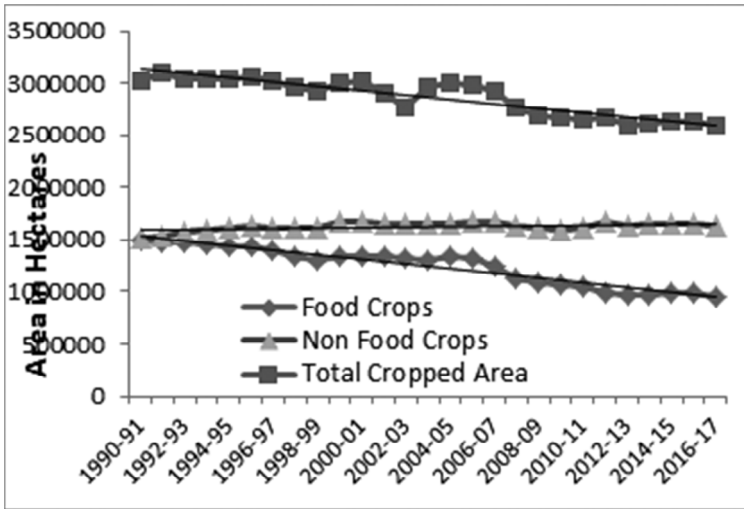
The total cropped area also faced decline in all the districts except Idukki, Kasaragod and Wayanad. The major factors behind this trend is the less remunerative nature of agriculture and the lack of competitive markets in Kerala. This has led to the concentration of cash crop.

Table 9.9 District-wise Trends in Total Cropped Area (in hectares)

DISTRICT	1990-91	1995-96	2000-01	2005-06	2010-11	2015-16
Thiruvananthapuram	207055	203959	194779	180221	154110	162848.1
Kollam	223092	220055	212329	189475	159706	149317.2
Pathanamthitta	127419	116591	115273	115087	103441	103571
Alappuzha	173768	156279	138595	121411	108489	101498
Kottayam	241885	221441	225402	219671	206789	203749.8
Idukki	194841	231467	267352	298662	308268	270486.8
Ernakulum	246786	227843	223275	208123	171574	165536.3
Thrissur	214455	212622	197828	193187	161216	174275.1
Palakkad	339057	357120	310872	329558	303461	293439.8
Malappuram	274765	267150	268505	275600	237474	241585.5
Kozhikode	215531	221674	229590	229162	201861	200842.1
Wayanad	158312	196756	208941	212736	175300	179487.7
Kannur	261284	276488	274838	258037	210851	225441.8
Kasaragod	141730	157780	154103	154797	144921	155497.6

Source: Department of Economics and Statistics, Government of Kerala various years

Figure 9.12 Comparison of Trends in the Area under Food Crops, Non-Food Crops, and Total Cropped Area.



Source: Department of Economics and Statistics, Government of Kerala.

Net Irrigated Area

Irrigation influence the choice of cropping pattern, variety of crops, method of cultivation as well as the time period of agriculture. The case of Kerala is much similar to the rest of the country having high dependency on monsoon for water supply in agricultural production. Most of the studies define a positive relationship between irrigation and agricultural productivity where an increase in the intensity of irrigational activities can lead to an increase in the productivity of the crops concerned. The Net Irrigated Area is the actual land area on which irrigation was used for growing crops for as many times as in an agricultural year. The Net Irrigated Area in hectares is reported the highest in Palakkad followed by Thrissur. The least area under irrigation accounts for Kozhikode, Kollam and Pathanamthitta. Thiruvananthapuram, Pathanamthitta, Alappuzha and some other districts are showing an increasing trend in

the net irrigated area. The reduction in area is significant in the case of Ernakulum and Thrissur.

Table 9.10 District-wise Trends in Net Irrigated Area (in hectares)

DISTRICT	1990-91	1995-96	2000-01	2005-06	2010-11	2015-16
Thiruvananthapuram	8135	6268	3021	4072	7703	8247
Kollam	1603	1987	1386	2620	3890	6054
Pathanamthitta	4075	5426	4372	6119	5825	5253
Alappuzha	26515	32406	40392	43657	42252	40404
Kottayam	7292	9174	15415	14647	14134	14595
Idukki	3132	5078	15630	17094	28748	41521
Ernakulam	52535	50506	32360	43637	33147	21865
Thrissur	72670	71085	85681	87762	68648	71333
Palakkad	72961	73248	82033	76998	82691	87253
Malappuram	31870	30384	29721	23724	27874	30204
Kozhikode	4934	5593	3267	5443	5564	4671
Wayanad	4321	4288	2717	10335	15225	12505
Kannur	13774	13902	21111	19515	24662	15215
Kasaragod	29552	32848	43935	45827	54650	54713

Source: Department of Economics and Statistics, Government of Kerala.

Except the other variables related to agriculture, it is noted that the net area irrigated is showing a rising trend in all the districts. This trend is more of an alarming one than favourable. Environmentalists and scientists say the economic

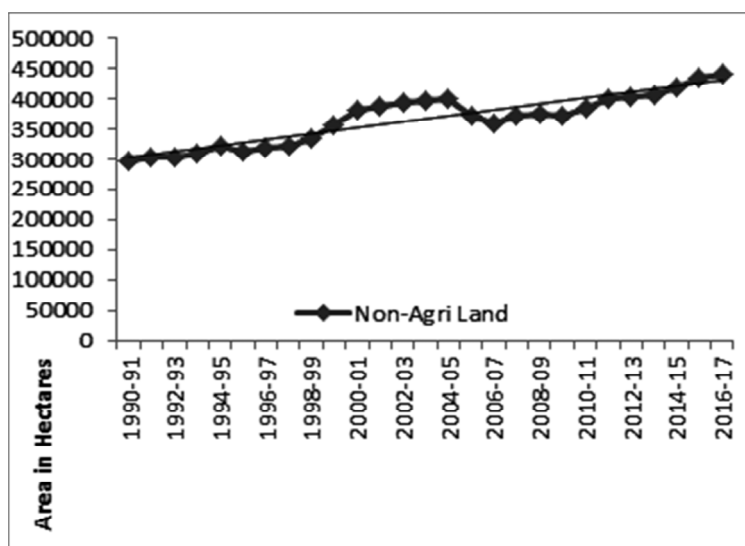
and real estate boom swallowing the farmlands, including paddy fields, which are also areas for water conservation, will have serious ecological fallout. This will lead to ill effects in the long run causing deterioration in land fertility and excessive water usage in agriculture. The central schemes like Pradhan Mantri Kirishi Sinchayi Jojana and Neeranchal can provide impetus to this.

Land Put to Non-Agricultural use

The land put to use for purposes other than agriculture such as building, pathways, roads, canals, rivers, bus stands, railways, local reservoirs, swamps etc. are brought under this category. A shift of land use from agriculture to non-agricultural practices could bring increasing threats to sustainable agriculture and diversity loss. The final stage of land-use change from agricultural to non-agricultural purpose is more related to the nature of urbanization in Kerala and the increasing demand for residential plots (Jose and Padmanabhan, 2016). This could be the major reason for the increased land put to non-agricultural activity in districts like Palakkad, Ernakulum and other major centres. The trend towards moving more into non- agricultural land use practices are a great threat to the sustainability of the farm culture of Kerala.

Land degradation is a major cause for change in land use and cropping pattern. Land degradation makes agriculture a relatively unprofitable occupation. This also results in change of land from agriculture to non-agriculture such as real estate, construction etc. Unsustainable agricultural activities like overuse of chemical fertilisers, the use of high yielding varieties of seeds, intensive cultivation, cultivation on steep slope, shifting cultivation, etc, are some major causes of land degradation (Karanakaran, 2013).

Figure 9.13 Trends in Land put to Non-Agricultural uses in Kerala



Source: Department of Economics and Statistics, Government of Kerala.

According to Raj (1985), the process of raising land values in Kerala was further helped by the growth of population and infra-structural investments in irrigation, communication and transport, particularly in regions with obviously too high commercial potential. With rising values of land and expanding opportunity for trade in agricultural produce came also the inflow of finance from outside the agrarian society through urban traders and money lenders. The land put for on agricultural used is increasing over the years in all the major districts. This shows the real threat in the farm sector which causes unavailability of land for cultivation. Beyond this, changing land patterns have more ecological and sustainability impacts. Surprisingly at Palakkad, where food grain production is considerably high, the area allotted for non-agricultural use is also on the increase. This leads to the conflict of productivity

over sustainability. In order to sustain huge production within a small area, the techniques of production should be varied to the extent that it causes serious environmental issues such as unscientific land use pattern, ground water depletion, rampant use of pesticides and fertilisers etc.

Table 9.11 Land Put to Non-Agricultural Use (in hectares)

District	1990-91	1995-96	2000-01	2005-06	2010-11	2015-16
Thiruvananthapuram	20785	20851	22877	24917	26949	33161
Kollam	23887	21614	22571	22136	25199	28314
Pathanamthitta	10884	13894	15108	14946	16361	17666
Alappuzha	23546	22878	23850	24153	20881	25114
Kottayam	21441	22144	26037	24388	25893	28449
Idukki	16788	14542	15248	8853	11971	13714
Ernakulam	34090	35272	41100	52833	40036	42941
Thrissur	27485	26885	33739	36630	36707	38313
Palakkad	31908	39520	52567	38684	41410	49021
Malappuram	20983	25314	36989	37706	44439	51203
Kozhikode	20949	22032	26410	23714	26577	31763
Wayanad	6968	8156	11915	10082	11070	12649
Kannur	22521	23099	29705	26504	29858	36727
Kasaragod	15146	16930	23757	24776	26823	25611

Source: Department of Economics and Statistics, Government of Kerala.

An analysis of the trends and patterns in the number of land transactions and the area under agricultural production in Kerala has been done in this chapter with an intention to get a descriptive view on the overall movement of these indicators. The analysis shows that there was an increasing trend in the number of land transactions in Kerala since 1990-91 onwards. It reached a peak during 2004-05 and remained almost at the same level till 2011-12. However, due to policy changes related to land transactions, there has been a continued fall in the number of land transactions since then. During the period between 2004-05 to 2011-12, which has witnessed large number of land transactions, has also recorded a rapid rate of decline in the GDP share of agriculture in Kerala. This is also coupled with a faster rate of decline in the net area sown in the state, especially the area under food crops. Interestingly, this is the period when there has been a considerable increase in the amount of land put for non-agricultural uses in Kerala. Thus, the analysis shows the possibility of a cause and effect relationship between the transfer of property rights on land in the form of land transactions (measured in terms of number of land registrations) and the agricultural production in Kerala.

Conclusion

A major characteristic of Kerala's agriculture is its intensive use of land. For most of the farmers in Kerala agriculture is now only a subsidiary occupation. There is also an increasing tendency to convert agricultural land for non-agricultural uses. A descriptive analysis shows that high labour cost, declining productivity, increased opportunities in alternative income sources, and the boom in lucrative real estate market as the major drivers for the transformation of agricultural land to other uses. The farmers' responses to these factors are mainly reflected in the changes in land use and agrarian structure of Kerala economy. We conclude that any attempt to enhance agricultural production in Kerala should address the agricultural land utilization. One reason for this result can be the implementation of restrictions on property

rights transfer on land in the form of increased stamp duty, registration fees, re-fixing of land values, and the enactment of legislations like the Kerala Conversion of Paddy Land and Wet Land Act, 2008, among others.

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